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Productivity Measures for Selected Industries



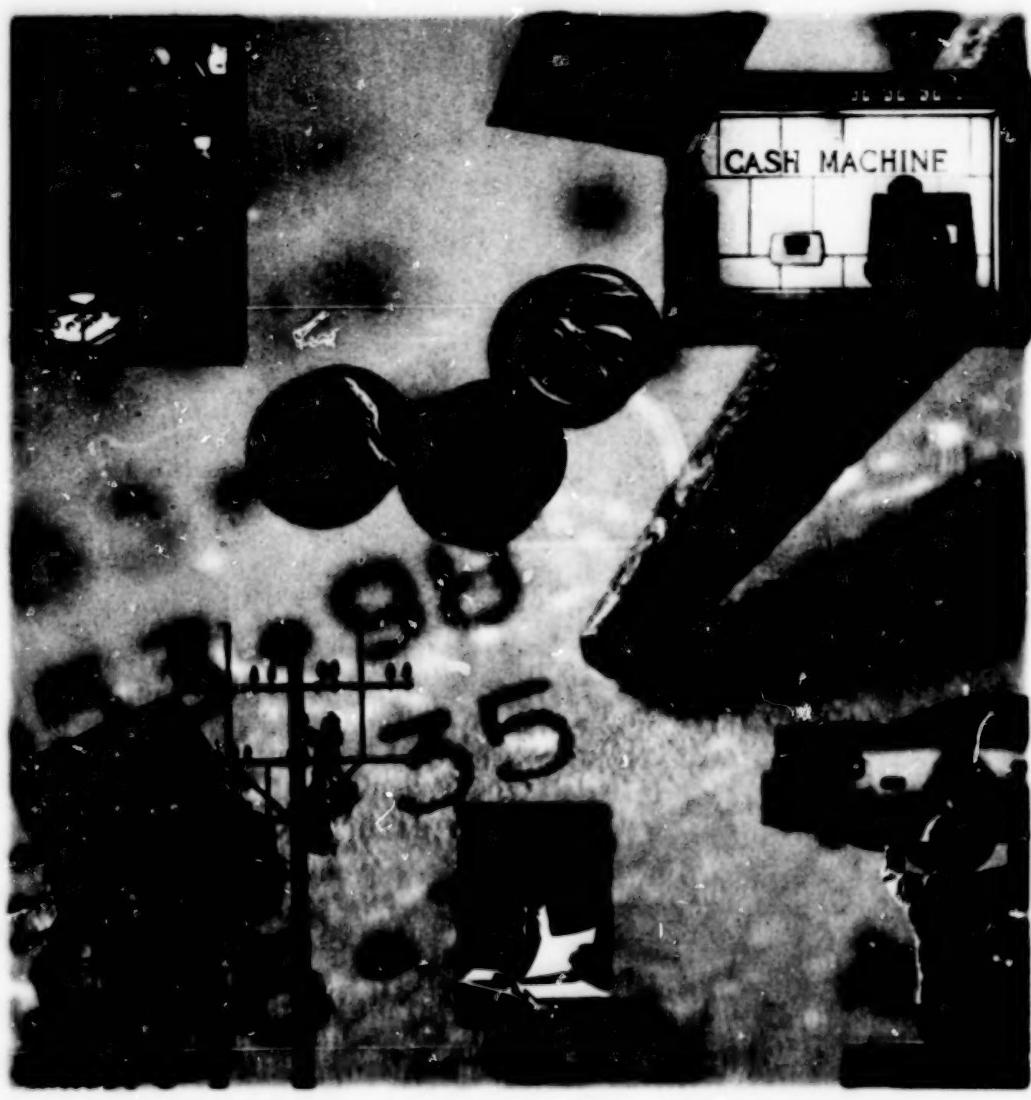
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Productivity Measures for Selected Industries



U.S. Department of Labor
Alexis M. Herman, Secretary

Bureau of Labor Statistics
Katharine G. Abraham, Commissioner

August 1997

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Preface

This annual bulletin updates indexes currently included in the industry productivity measurement program of the Bureau of Labor Statistics (BLS). The bulletin is comprised of two sections. Part I discusses labor productivity trends and part II discusses multifactor productivity trends for selected industries. Labor productivity measures for selected industries have been updated through 1995. Industry multifactor productivity measures include revisions through 1994.

This bulletin was prepared in the Bureau's Office of Productivity and Technology, under the direction of Kent Kunze, Chief of the Division of Industry Productivity Studies. Industry labor and multifactor productivity measures were prepared by Edwin Adelman, Ziaul Ahmed, Lisa Brandt, Gary Burdette, Robert Critchlow, Mark Dumas, Brian Friedman, J. Edwin Hennebeger, Paul Kern, Virginia Klarquist, Alexander Kronemer, John Olsen, Craig Saunders, Mark Sieling, Clayton Waring, Patricia Wilder, Arthur Young, and James York, under

the direction of John Duke, Mary Jablonski, and Lisa Usher.

The data presented in this bulletin supersede those published in Bulletin 2480, July 1996 and are subject to future revision. A detailed description of the methods used to construct these indexes can be found in appendix A, "Methods and Data Sources," of this bulletin.

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Further information concerning the indexes presented in this bulletin can be obtained by writing to the Office of Productivity and Technology, Room 2150, Bureau of Labor Statistics, Washington, DC 20212-0001. Telephone: (202) 606-5618. World Wide Web: <http://stats.bls.gov>

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Introduction

Productivity statistics can be used to analyze the economic performance of an industry or the whole economy. The productivity measures most often studied are labor and multifactor productivity. *Labor productivity* trends relate the changes in outputs to changes in labor inputs; *multifactor productivity* trends relate changes in outputs to changes in several inputs, usually labor, capital, and other inputs.

This bulletin presents data on labor productivity trends in 180 manufacturing and nonmanufacturing industries, primarily at the 4-digit Standard Industrial Classification level. Measures for these industries are published on an annual basis. Each year new industries are added to those already published. This bulletin includes labor productivity indexes for two new industries: Mobile homes manufacturing and the U.S. Postal Service. An article on the mobile homes industry was published in the May 1997 issue of the *Monthly Labor Review (MLR)*. A technical note on the Postal Service measure is available upon request. Measures of multifactor productivity for 10 industries are also presented in this bulletin.

Part I presents indexes of output per employee hour for each industry. Most of these measures have been updated to 1995. The industries being measured are not necessarily a representative cross-section of U.S. industries. The labor productivity measures describe the relationship between output in real terms and the labor time involved in production. Although the measures relate output to employment and employee hours, they do not measure the specific contributions of labor, capital, or any other factors of produc-

tion. Rather, they reflect the joint effect of a number of interrelated influences, such as changes in technology, capital investment per worker, level of output, utilization of capacity, layout and flow of material, managerial skill, and skills and effort of the work force. Note that, occasionally, the year-to-year movements in productivity measures may be somewhat erratic, particularly in the smaller industries. The annual changes in an industry's productivity are based on sample data, which are likely to differ from data generated by a census of companies in the industry. As a result, long-term trends tend to be more reliable indicators of the performance of an industry than are the year-to-year changes.

Part II presents indexes of multifactor productivity. These indexes reflect trends in output per unit of combined labor, capital and intermediate purchases inputs. Changes in capital and in intermediate purchases relative to labor influence the movements in labor productivity. Indexes of multifactor productivity are not affected by these influences because changes in capital and intermediate purchases inputs are accounted for in the combined input measure. Most of the multifactor productivity indexes have been updated to 1994.

The Bureau of Labor Statistics also publishes indexes of output per hour and multifactor productivity for the business sector and for the nonfarm business, manufacturing, and corporate sectors. These data are presented in several BLS publications, including "Productivity and Costs" (quarterly news release), and the *Monthly Labor Review*. Reports on individual industries are available from the Bureau of Labor Statistics on request.

Part I. Labor Productivity Trends for Selected Industries

Current trends

The Bureau of Labor Statistics presently maintains indexes of labor productivity (measured as output divided by hours) for 150 distinct industries. Available data allowed 147 of these to be updated to 1995. An additional 30 measures are presented at higher levels of aggregation. For the purposes of highlighting recent trends in productivity, only the 147 nonduplicated industries are described. (All 180 industries are included in table 1.)

When analyzing year-to-year productivity changes two caveats should be observed. First, establishments making up an industry may not be able to adjust output and hours input optimally within a year. It may take longer for establishments to adjust fully to changing market conditions (such as a decline in demand). Because of this, a 1-year rate of change in productivity may diverge from the industry's trend. Second, the most recent 1-year rates of change should be viewed with caution because the data sources used to develop the indexes are preliminary, and revisions are possible.

Of the 147 unique industries updated to 1995, 69 percent experienced gains in output per hour. This is slightly better than 1994's percentage of 67. Output gains were recorded for 70 percent of these measures in 1995, a reduction from the 78 percent which showed additions to output in 1994. Hours advanced in 53 percent of these industries, while 61 percent saw gains in hours in 1994.

The BLS maintains measures for 111 unique manufacturing industries, all of which were updated to 1995. Sixty-seven percent of these showed productivity gains—the same percentage as in 1994.

In 1994, output gains were achieved in 77 percent of the manufacturing industries, and 62 percent had an increase in hours. During 1995, the percent of industries with output gains dropped to 68, while 54 percent had growth in hours.

Motor vehicles, the largest measured industry in the manufacturing group, employed 968,000 individuals in 1995. The labor productivity growth rate declined from 1994 to 1995 (1.8 percent to -2.7 percent) as output and hours growth slowed dramatically. Output growth fell 12.7 percentage points (14.4 percent to 1.7 percent) and hours not as strongly (12.4 percent to 4.5 percent), which led to the decline in productivity.

A second large industry in the manufacturing group is steel with nearly 241,000 persons in 1995. Productivity rose by 0.6 percent in the steel industry in 1995, after climbing by 7.9 percent in 1994. Output expansion (0.7 percent) was just above hours growth in 1995 (0.2 percent) whereas in 1994 output

was 8 percentage points above input growth (8.9 percent versus 0.9 percent).

The trade sector of the U.S. economy contains some of the largest industries, in terms of employment, in the U.S. economy. In 1995, 70 percent of the trade industries for which BLS has developed measures registered productivity gains. Also in 1995 output rose in 75 percent of these industries, while hours declined in 50 percent.

The largest industry for which BLS develops productivity indexes is in the trade sector: Eating and drinking places posted a slight gain in output per hour of 0.8 percent in 1995. This was achieved by output growth of 2.3 percent and a 1.4-percent increase in hours.

Family clothing stores achieved an impressive advance in productivity of nearly 12 percent in 1995 compared to a more modest 3 percent in 1994. The 1995 improvement was achieved with a combination of reductions in hours (-5.2 percent) and gains in output (6.0 percent).

Output and hours growth were slowing down in the trade sector in 1995 relative to 1994. Output expansion was greater in 80 percent of the industries discussed in this bulletin in 1994 than in 1995. Also, 70 percent showed faster hours growth in 1994 than 1995.

All of the finance and services industries showed increases in output per hour in 1995. Auto repair shops led the group by posting a rise in output per hour of 5.4 percent in 1995, following an even better performance in 1994 (7.3 percent). Although output growth slowed in auto repair shops in 1995 from 1994 (6.3 percent to 3.9 percent), the decline in hours accelerated (-0.9 percent to -1.4 percent), leading to continued productivity gains.

Commercial banks employed nearly 1.5 million persons in 1995. After posting flat productivity in 1994 the industry has rebounded smartly: Hours contracted 0.3 percent and output increased 3.8 percent, resulting in productivity growth of 4.1 percent in 1995.

With the exception of the U.S. Postal Service (a new measure for the group), all 6 industries in the transportation, communications and utilities group had productivity gains in 1995. This is slightly better than 1994 when the Postal Service and gas utilities posted negative productivity growth.

For petroleum pipelines, a solid 1994 productivity performance of 3.5 percent growth was followed by an even healthier rate in 1995, 8.9 percent. The 1995 expansion of productivity was accomplished with an hours reduction of 12.3 percent, which surpassed the output decline of 4.5 percent.

The mining group contains five distinct industries, and their productivity growth rates for 1995 were quite diverse. In copper mining, output per hour fell over 11 percentage points from the previous year (6.7 percent in 1994 versus -4.5 percent in 1995). However in iron mining, growth in output per hour was up in 1995 by 15 percentage points from 1994 (-2.2 percent in 1994 versus 12.8 percent in 1995). Crude petroleum and natural gas production registered a productivity gain of 7.2 percent in 1995. Output per hour in coal mining increased 4.5 percent, while in nonmetallic minerals, productivity slipped by 1.3 percent in 1995.

Long-term trends, 1973-95

Productivity increased in 89 percent of the industries included in this bulletin during the period 1973 to 1995. Average annual rates of growth among these industries ranged from 0.1 percent to 11.1 percent. The portion of industries with productivity growth varied during the subperiods. From 1973 to 1979, 76 percent of the industries recorded an increase in productivity. The percentage rose to 86 percent during 1979-90, before declining to 82 percent in the 1990-95 subperiod. (See chart 1). Long-term average annual rates of change in productivity and related indexes, for each industry, appear in tables 1-181 of this publication.

BLS publishes productivity measures that span the entire 1973-95 period for 108 separate industries in the manufacturing sector. Ninety-two percent of these achieved productivity gains from 1973 to 1995. The percentage of industries with productivity growth fluctuated during the period. From 1973 to 1979, 80 percent of the manufacturing industries recorded increases in productivity. This percentage climbed to 88 percent in the 1979-90 subperiod, and then fell to 82 percent during the 1990-95 period.

All of the largest manufacturing industries—those employing more than 200,000 workers—registered increases in productivity over the long-term, 1973-95. They include: Motor vehicles and equipment (an average annual rate of 1.9 percent); miscellaneous plastics products, not elsewhere classified (2.3 percent); aircraft (2.4 percent); steel (3.8 percent); poultry dressing and processing (3.5 percent); pulp, paper, and paperboard mills (2.5 percent); and bakery products (0.5 percent). These large goods-producing industries all recorded productivity growth during each of the three subperiods, with the exception of bakery products which declined 0.2 percentage point in 1990-95.

Household audio and video equipment registered the highest long-term rate of growth of productivity of all the measured manufacturing industries from 1973-95, averaging 11.1 percent per year. This long-term rate reflected an average annual *increase* in output of 5.2 percent and an average annual *decrease* in hours of 5.2 percent. Output per hour rose in each of the subperiods for this industry. Oil and gas field machinery recorded the biggest decline in output per hour of the manufacturing industries, 1.3 percent annually for 1973-95. Output fell more rapidly than hours, 1.8 percent, on average, compared to 0.5 percent. Productivity advanced during the

most recent subperiod, 1990-95, growing 0.6 percent per year.

The retail trade sector employed more than 21 million people in 1995, and BLS industry productivity measures covered most of them. Of the 18 separate measured industries in this sector, 83 percent exhibited increases in output per hour from 1973 to 1995. Similar to the manufacturing sector, the portion of retail trade industries with productivity growth fluctuated during the period. From 1973 to 1979, 67 percent of the retail trade industries recorded increases in productivity. After rising to 83 percent during the 1979-90 subperiod, the portion of industries with productivity growth fell to 67 percent in the 1990-95 subperiod.

The largest industries measured by BLS are in the retail trade sector. The two largest industries, eating and drinking places and grocery stores, registered declines in productivity over the long-term, 1973-95. Productivity slipped by 0.3 percent per year in the eating and drinking places industry, and by 0.8 percent per year in the grocery stores industry. Output per hour in both industries declined during all three subperiods. The next largest industry, department stores, achieved average annual productivity gains of 2.6 percent from 1973 to 1995. From 1973 to 1979, output per hour in department stores grew 3.3 percent; this growth rate slowed to 2.2 percent in 1979-90, and then rebounded to 2.7 percent during 1990-95. The remaining industries in the trade sector all recorded increases in productivity over the 1973-95 period with the exception of retail bakeries, which recorded a 1.8-percent annual decrease in productivity.

The radio, television, and computer stores industry, which employed nearly 400,000 persons in 1995, has shown impressive and sustained gains in output per hour. From 1973 to 1995, labor productivity improved at an average annual rate of 6.8 percent. Output grew by a robust 11.3 percent annually while hours increased at a slower rate, 4.2 percent per year. Production accelerated during the subperiods from 9.4 percent on average in 1973-79 to 11.0 percent in 1979-90, and then to 14.4 in 1990-95. Contributing to the growth in productivity was a shift from small stores to large chain outlets which can take advantage of economies of scale.

BLS has measures of labor productivity for 1973-95 covering six distinct industries in transportation, communications, and utilities. Productivity advanced in five of these industries over the 1973-95 period, and also during each of the subperiods. Gas utilities recorded an average decline in output per hour of 1.4 percent for 1973-95.

The United States Postal Service is the largest transportation industry measured by BLS, employing more than 840,000 workers.¹ Productivity in the Postal Service, measured on a fiscal year basis, advanced 0.8 percent per year from 1973 to 1995. Productivity growth ranged from 0.5 to 1.1 percent during the subperiods. (For more information on the Postal Service, see the section below, "New industry productivity measures.")

¹ The Office of Management and Budget defines the Postal Service as a transportation industry because its primary activity is moving things (letters, packages, etc.).

Air transportation employed nearly 600,000 workers in 1995. During the 1973-95 period labor productivity, measured by output per employee, expanded 3.2 percent annually. Output grew faster than employment, 5.5 and 2.3 percent, respectively. Productivity increased fastest during the earliest subperiod, 5.6 percent annually from 1973-79. The growth rate slipped to 1.9 percent per year during 1979-90, and then increased to 3.1 percent annually in 1990-95. Since deregulation this industry has reduced costs and increased output (in part by filling higher percentages of available seats) in innovative ways.

The telephone communications industry increased output per hour by 5.7 percent on average from 1973 to 1995. Output grew 5.6 percent per year while hours remained virtually unchanged, decreasing 0.1 percent annually. Contributing to the growth in productivity were new technologies such as fiber optics, direct dialing, and electronic operator systems.

BLS has measures of labor productivity in five distinct industries in the finance and services sector. Hotels and motels employed the largest number of individuals in 1995, over 1.6 million. From 1973 to 1995 output per hour increased at an average annual rate of 0.5 percent. Productivity rose 1.2 percent annually during the 1973-79 subperiod, fell 1.2 percent per year in 1979-90, and then grew at a 3.4-percent rate during the 1990-95 subperiod. The use of computers in reservation systems was responsible, in part, for the growth in productivity.

In finance and services, commercial banks experienced the highest average annual growth in output per hour over the long-term, 1973-95, 2.0 percent. Productivity growth accelerated during the subperiods from 0.6 percent per year in 1973-79 to 2.0 percent in 1979-90, and reached 3.5 percent in 1990-95. Contributing to the growth in productivity was the expanded use of computer technology in transactions with customers (including automatic teller machines—ATM's—and direct deposit of checks), and in administrative and accounting activities.

Of the five industry productivity measures in the mining sector, four increased from 1973 to 1995. Copper mining achieved the greatest annual growth in output per hour, advancing 4.9 percent each year, on average. The average annual output per hour in crude petroleum and natural gas production decreased by 1.6 percent over the long-term.

New industry productivity measures

Mobile homes (SIC 2451). The mobile homes manufacturing industry experienced modest productivity growth, as measured by output per hour, 0.6 percent per year, between 1977 and 1995. Output grew at an average annual rate of 1.2 percent and employee hours rose 0.6 percent. Productivity growth in the mobile homes industry during this period was low compared to other manufacturing industries published by the Bureau of Labor Statistics. It reflected declining demand for new housing, low capital expenditures per employee, and a largely inexperienced work force.

The mobile homes industry comprises establishments primarily engaged in manufacturing mobile homes and non-residential mobile buildings, such as offices, banks, and classrooms. Mobile homes are classified into two major categories—single wide, where the structure is a single unit, and multi-wide, where two or more units are joined together on site to make up the final structure. The mobile homes industry is a part of the market for new housing, where wide seasonal fluctuations have been common.

The demand for mobile homes was sluggish over most of the 1977-1995 period. From 1977 through 1991, output in the mobile homes industry fell in 10 out of the 14 years, declining at an annual rate of 2.2 percent. Factors contributing to this decline included the drop in energy prices in the mid-1980's, which adversely affected the economies of the oil states in the Southwest—a major market for mobile homes—and competition from other types of lower cost housing. As a result of these factors, the industry went through a severe contraction as the number of companies and plants declined.

The mobile homes industry is beset by wide fluctuations in the demand for new housing, resulting from the business cycle, seasonal variations in home construction, changes in mortgage rates, and the small size of an average plant. This makes it difficult for mobile home producers to justify sizable investment in capital equipment, worker training, and long-term technological research. Between 1977 and 1995, the industry usually adjusted to declining market conditions by laying off workers during periods of falling demand. Low capital expenditures per employee for this industry, which were below the average for all operating manufacturing establishments, limited productivity growth for the industry during much of this period.

From 1991 to 1995, output soared in the mobile homes industry, growing at an annual rate of 13.9 percent. Factors contributing to this performance included a pent-up demand for affordable housing; population growth in traditional consumer groups; employment growth in the Southeast, which is a major market for mobile homes; and a shift in product mix to larger, more customized homes, which has broadened the consumer base for this industry.

Additional information on productivity in the mobile homes industry can be found in "Productivity Trends in the Mobile Homes Industry," by John G. Olsen, *Monthly Labor Review*, May 1997.

United States Postal Service (SIC 43). Labor productivity in the Postal Service increased 1.0 percent per year between 1967 and 1995. Underlying this increase were rises in both output (1.9 percent per year) and labor input (0.9 percent per year). The 1967-95 period is marked by fairly steady increases in output, labor input, and productivity. Output dropped in 4 of the 28 measured years and input dropped in 9. Furthermore, the year-to-year changes in output and input were fairly modest during the measured period.

In 1995, Postal Service productivity decreased 0.1 percent as labor input increased 1.5 percent and output increased 1.3

percent. Productivity also dropped in 1994. The decreases in productivity are partly due to increases in labor input which reflect the attempt of Postal management to improve the timeliness of mail delivery.

U.S. Postal Service productivity measures were calculated and published by the BLS for many years as part of the Federal Productivity Measurement program. (See *Productivity Measures for Selected Industries and Government Services*, BLS Bulletin 2480, July 1996.) With the termination of the Federal program, the Postal Service has been incorporated in the industry program.

Before shifting the Postal Service to the industry program, the output index was revised to conform to the index number methodology presently used in the industry program, that is the Tornqvist index formula. The output index was recalculated starting with the year 1987. Prior to then, specifically for the years 1967 to 1987, the output index reflects the old

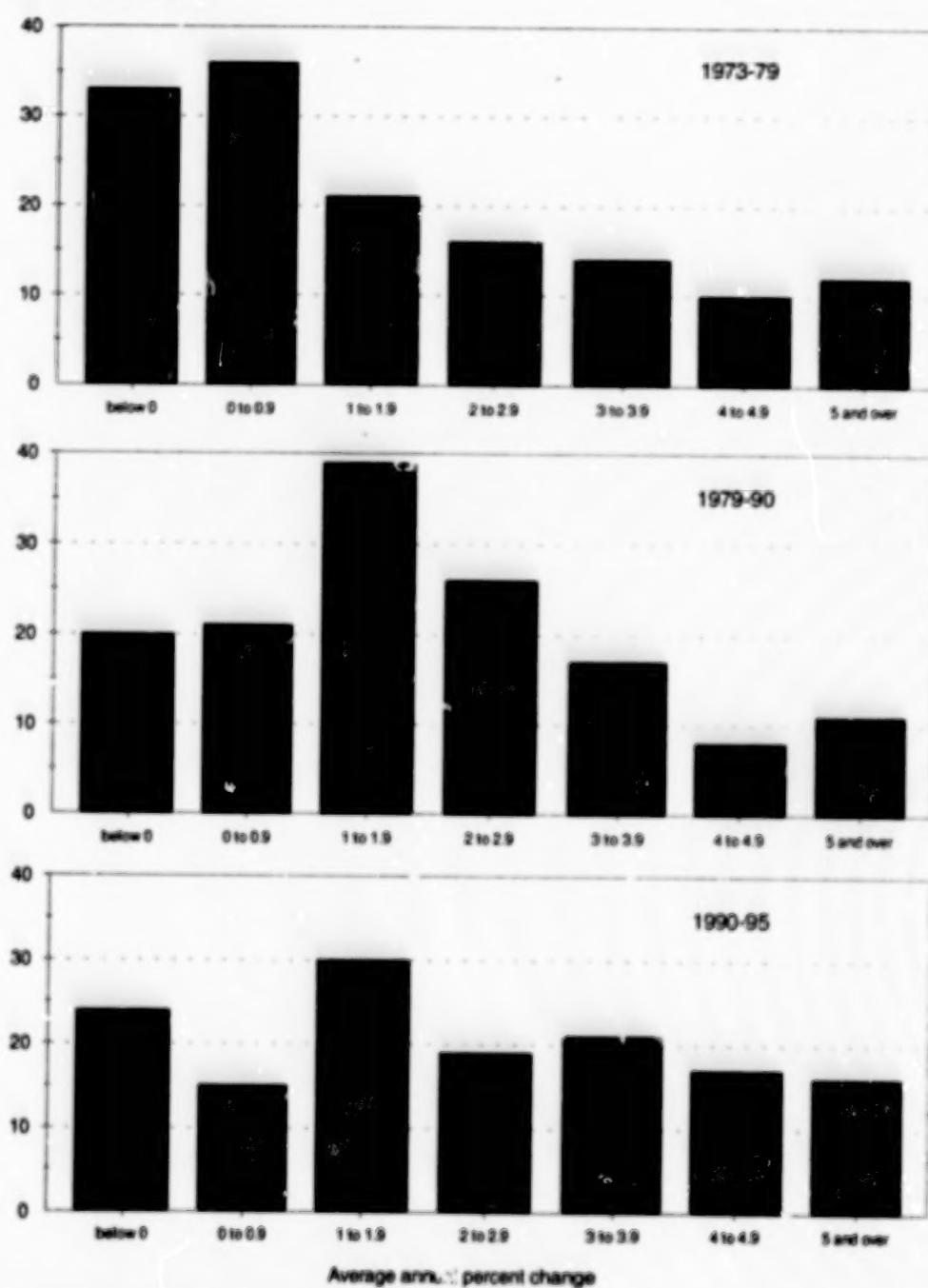
Federal program methodology, a chain weighted index with base year weights revised every 5 years.

The Postal Service measures differ from other BLS industry productivity measures in several respects. First, they reflect the Federal Government fiscal year of October 1 to September 30 rather than the calendar year which is used for all other industries. This requirement is dictated by the manner in which the data are collected. Second, the measures represent a single organizational unit with a separate SIC code. Third, the labor measure is based on full-time equivalent (FTE) employee years. These are computed by dividing total hours of full-time, part-time, and intermittent workers by the number of hours in a standard work year. An FTE index will produce the same trend as an hours index if correctly calculated.

Additional information on the calculations, data sources and methodology is available from the Office of Productivity and Technology, U.S. Bureau of Labor Statistics.

Chart 1. Output per hour in 142 industries, selected periods

Number of industries



Note: Average annual percent change using compound rate formula.

Table 1. Selected Industries: Employment and annual rates of change in output per hour, selected periods

SIC Code	Industry	1995 Employment (thousands)	Annual percent change in output per hour ^a				
			Long-term trends		Current trends		
			1973-79	1979-80	1980-95	1993-94	1994-95
Mining							
101	Iron mining, usable ore	8	.0	5.2	1.6	-2.2	12.8
102	Copper mining, recoverable metal	15	2.3	7.1	3.2	6.7	-4.5
12	Coal mining	106	-3.8	7.3	5.4	4.9	1.5
122	Buminous coal and lignite mining	98	-3.9	7.4	5.4	4.9	4.1
131	Crude petroleum and natural gas production	150	-7.3	-1.2	4.5	6.1	7.2
14	Nonmetallic minerals, except fuels	106	1.1	.8	-3	3.6	-1.3
142	Crushed and broken stone	40	2.2	1.2	.6	1.9	-2.9
Manufacturing							
2011,13	Pork meat products	233	2.6	1.1	1.2	-3.5	1.7
2011	Meat packing plants	141	2.4	2.3	1.0	-3.9	.7
2013	Sausages and other prepared meats	92	5.5	.4	1.6	-3.4	3.8
2015	Poultry dressing and processing	234	5.9	2.6	2.4	-3	2.6
202	Dairy products	148	3.4	3.4	1.9	2.0	2.8
2022	Cheese, natural and processed	40	.2	7.4	2.2	1.7	2.6
2026	Fluid milk	66	4.2	3.6	2.3	5.4	2.6
203	Preserved fruits and vegetables	242	1.1	1.6	3.0	.7	3.2
2033	Canned fruits and vegetables	78	1.7	1.5	3.1	4.8	7.7
2037	Frozen fruits and vegetables	51	1.5	.5	4.3	6.3	1.6
204	Grain mill products	128	3.9	4.2	1.9	1.0	5.6
2041,45	Flour (inc. flour mixes) and other grains	33	1.4	2.6	1.1	2.5	-2.7
2041	Flour and other grain mill products	19	2.7	2.7	1.7	3.8	-7.3
2043	Cereal breakfast foods	20	2.1	2.8	3.4	11.6	11.1
2044	Rice milling	5	2.6	3.8	-4	-15.7	-6.0
2046	Wet corn milling	10	11.8	7.4	3.4	-1.8	11.4
2047,48	Prepared feeds for animals and fowls	60	4.3	4.4	1.6	-2.0	6.5
205	Bakery products	209	3	1.0	-2	.9	1.2
2061,62,63	Sugar	19	2.2	1.4	3.7	2.3	6.6
2061,62	Raw and refined cane sugar	10	3.5	1.0	2.5	-4.3	5.9
2063	Beet sugar	5	5	2.0	6.8	13.1	9.4
2062	Malt beverages	36	6.7	5.1	1.3	4.4	.4
2066	Bottled and canned soft drinks	96	4.6	6.3	4.8	3.9	6.4
2062	Fresh or frozen prepared fish	45	.1	-5	-2	-6.9	-5.5
211,23	Tobacco products	35	3.5	2.4	5.7	27.7	14.1
211,3	Cigarettes, chewing and smoking tobacco	32	2.2	1.8	6.3	28.1	14.7
221,2	Cotton and synthetic broadwoven fabrics	149	4.5	3.3	5.7	6.6	6.5
2251,52	Hosiery	64	6.7	1.4	3.1	6.3	1.8
2261	Yarn spinning mills	73	3.4	4.1	4.7	4.6	6.1
231	Men's and boys' suits and coats	36	4.0	.3	4.2	18.4	-5.9
2392	Housefurnishings, except curtains and draperies	57	-2.3	2.6	2.6	-3.9	1.1
2421	Sawmills and planing mills, general	148	1.2	2.9	2.0	1.7	6.9
2426	Hardwood dimension and flooring mills	37	-2	1.3	4.1	-2	5.5
2431	Milwork	111	-1.5	2	-2.5	-4.3	-2.8
2434	Wood kitchen cabinets	78	1.7	.5	1.9	-6	1.5
2435,36	Veneer and plywood	57	.1	3.5	-2.4	-6.3	-3.2
2435	Hardwood veneer and plywood	26	-1	1.3	-1.8	-14.7	-7.0
2436	Softwood veneer and plywood	29	-5	4.7	-1.3	-1.9	.1
244	Wood containers	51	15.3	3.9	-8	.5	6.0
2451	Mobil homes	61	13.9	.4	-3	-6.0	2.2

See footnotes at end of tables.

Table 1. Selected Industries: Employment and annual rates of change in output per hour, selected periods—Continued

SIC Code	Industry	1995 Employment (thousands)	Annual percent change in output per hour ^a				
			Long-term trends		Current trends		
			1973-79	1979-90	1990-95	1993-94	1994-95
Manufacturing—Continued							
251	Household furniture	281	1.7	1.4	2.3	1.7	4.3
2511,17	Wood household furniture	132	2	1.2	1.3	-5	3.2
2512	Upholstered household furniture	90	3.5	1.4	5.2	8.8	6.2
2514	Metal household furniture	22	.7	3.2	-1.3	-10.0	-1.0
2515	Mattresses and bedsprings	31	5.1	1.4	.9	1.1	5.1
252	Office furniture	63	2.2	.9	.9	-1	1.7
2522	Wood office furniture	28	6.0	-1.7	1.2	-4	-7
	Office furniture, except wood	34	1.4	2.0	.6	1.2	3.1
261,2,3	Pulp, paper, and paperboard mills	227	2.4	2.6	2.5	7.6	3.4
2653	Corrugated and solid fiber boxes	131	3.7	1.3	1.3	4.3	-2.2
2657	Folding paperboard boxes	48	.8	1.4	3.8	4.2	3.2
2673,74	Paper and plastic bags	58	.6	-2	-1	4.9	-5.0
281	Industrial inorganic chemicals	119	.6	2.2	1.9	1.0	5.4
2812	Alkalies and chlorine	10	4.8	5.6	-1.0	-8	4.3
2816	Inorganic pigments	12	-1.1	4.0	.7	6.7	-6.0
2819 (part)	Industrial inorganic chemicals, n.e.c.	74	2	1.6	3.0	2.3	11.7
2823,24	Synthetic fibers	66	10.8	3.1	5.0	6.3	5.3
2841	Soaps and detergents	43	4	3.2	-3	-8	12.8
2844	Cosmetics and other toiletries	68	.9	.7	2.6	2.9	3.2
285	Paints and allied products	57	4.0	2.6	1.9	7.3	-1
2869	Industrial organic chemicals, n.e.c.	118	4.1	.6	-1.2	8.7	-3.0
287	Agricultural chemicals	53	2.5	2.9	2.0	.6	1.6
2873	Nitrogenous fertilizers	9	1.8	3.6	.0	-5.4	-3.2
2874	Phosphatic fertilizers	10	1.5	3.5	3.4	15.7	-3.7
2875	Fertilizers, mixing only	10	3.4	.2	1.2	-14.5	.8
2879	Agricultural chemicals, n.e.c.	25	2.0	2.2	3.3	4.1	8.0
291	Petroleum refining	104	-3	2.6	4.0	3.1	7.4
301	Tires and inner tubes	80	2.2	4.4	5.0	6.5	5.9
3052	Rubber and plastics hose and belting	27	.7	2.1	-3	-7.5	-9
308	Miscellaneous plastics products, n.e.c.	709	.3	3.2	2.7	3.1	.3
314	Footwear, except rubber	53	.7	-2	1.7	10.0	-4.5
3221	Glass containers	31	1.8	2.3	.4	4.7	-1.0
324	Cement, hydraulic	18	-6	4.6	1.9	4.8	-1.8
325	Structural clay products	34	1.1	1.6	.9	9.1	-5
3251,53,59	Clay construction products	27	.1	2.4	1.7	5.6	3.1
3251	Brick and structural clay tile	14	-5	1.6	1.4	7.0	2.3
3253	Ceramic wall and floor tile	11	2.9	3.6	2.0	.0	4.5
3255	Clay refractories	7	2.7	.9	-1.5	12.9	-10.5
3271,72	Concrete products	86	-2	1.2	1.9	-6	5.2
3273	Ready-mixed concrete	101	-5	.4	-9	-4.0	3.0
331	Steel	241	.4	4.8	5.6	7.9	.6
3321	Gray and ductile iron foundries	83	2	1.4	.8	2.1	-2.7
3324,25	Steel foundries	43	-2	-7	1.8	.7	3.9
3325	Steel foundries, n.e.c.	27	-1	.6	1.8	-2.7	5.2
3331	Primary copper	6	3.8	6.8	-1.9	-14.8	4.5
3334	Primary aluminum	23	.2	3.3	-8	-6.3	3.2
3351	Copper rolling and drawing	23	.9	.9	1.3	8.3	.0
3353,54,55	Aluminum rolling and drawing	55	1.1	.7	.6	6.1	-5.7

See footnotes at end of table.

Table 1. Selected Industries: Employment and annual rates of change in output per hour, selected periods—Continued

SIC Code	Industry	1995 Employment ¹ (thousands)	Annual percent change in output per hour ²				
			Long-term trends			Current trends	
			1973-79	1979-90	1990-95	1993-94	1994-95
Manufacturing—Continued							
3411	Metal cans	33	4.1	4.1	4.5	4.5	4.0
3423	Hand and edge tools, n.e.c.	35	.5	-1.5	.7	8.0	-2.4
3433	Heating equipment, except electric	20	1.7	2.6	2.8	6.9	.7
3441	Fabricated structural metal	73	-2.0	1.5	1.7	1.6	.3
3442	Metal doors, sash, and trim	76	.4	1.0	-1.3	-2.1	-6.3
3443	Fabricated plate work	102	n.a.	1.9	3.1	11.2	.1
3452	Bolts, nuts, rivets, and washers	48	.7	1.6	1.4	3.2	4.9
3465,66,69	Metal stampings	214	.8	.5	5.3	4.0	2.4
3465	Automotive stampings	116	1.4	1.5	6.0	3.4	2.8
3469	Metal stampings, n.e.c.	94	.6	-9	4.5	4.3	3.2
3491,92,94	Valves and pipe fittings	84	.4	.6	1.4	5.3	.0
3498	Fabricated pipe and fittings	28	-3.2	-7	1.1	-4	.1
3519	Internal combustion engines, n.e.c.	62	.7	2.1	2.9	14.6	4.5
352	Farm and garden machinery	100	1.0	1.6	3.1	5.4	8.5
3523	Farm machinery and equipment	74	.6	1.4	1.7	6.2	9.1
3524	Lawn and garden equipment	26	2.9	1.2	5.9	1.7	8.3
3531	Construction machinery	78	.7	1.7	3.9	15.1	7.9
3532	Mining machinery	17	-2.2	.9	2.1	-9.1	9.8
3533	Oil and gas field machinery	40	-2	-2.8	.6	-1.8	-2.0
3541,42	Machine tools	57	-7	-1	2.8	-3.9	4.7
3541	Metal cutting machine tools	40	-1	-2	2.4	-1.3	1.7
3542	Metal forming machine tools	17	-2.2	-1	3.5	-9.3	11.4
3545	Machine tool accessories	51	-9	.3	3.3	13.1	6.5
3561,63,94	Pumps and compressors	81	.9	1.4	1.8	5.4	1.0
3561,94	Pumps and pumping equipment	56	1.4	1.1	1.9	5.1	2.5
3562	Ball and roller bearings	39	.3	-1.5	2.9	2.4	.8
3563	Air and gas compressors	26	-3	2.1	1.3	5.2	-2.0
3585	Refrigeration and heating equipment	139	-3	.7	1.6	3.0	-1
3592	Carburetors, pistons, rings, and valves	22	-3.7	3.1	4.6	4.8	.1
3612	Transformers, except electronic	41	1.5	-2	8.3	17.7	11.5
3613	Switchgear and switchboard apparatus	42	-1	1.8	4.3	.6	6.4
3621	Motors and generators	79	.1	1.1	6.6	-2.1	11.8
3631,32,33,39	Major household appliances	92	3.2	2.0	4.3	8.7	-4.2
3631	Household cooking equipment	21	4.2	2.1	4.8	22.9	-1.5
3632	Household refrigerators and freezers	30	3.6	1.9	3.0	8.5	-2.0
3633	Household laundry equipment	17	2.7	1.9	4.8	3.9	-12.6
3639	Household appliances, n.e.c.	24	3.0	1.7	4.8	1.1	-2.4
3641	Electric lamp bulbs and tubes	22	3.7	2.3	-4	-2.0	-3.0
3645,46,47,48	Lighting fixtures and equipment	76	.4	1.0	2.3	6.1	-2.3
3651	Household audio and video equipment	56	9.8	11.1	12.7	9.9	25.7
371	Motor vehicles and equipment	968	2.1	2.5	.4	1.8	-2.7
3721	Aircraft	244	3.7	1.2	3.3	-7.5	.5
3825	Instruments to measure electricity	70	1.6	3.6	9.0	18.2	13.1
386	Photographic equipment and supplies	85	5.0	2.9	3.7	4.6	-2.5

See footnotes at end of table.

Table 1. Selected Industries: Employment and annual rates of change in output per hour, selected periods—Continued

SIC Code	Industry	1995 Employment (thousands)	Annual percent change in output per hour ²				
			Long-term trends		Current trends		
			1973-79	1979-90	1990-95	1993-94	1994-95
Transportation							
4011	Railroad transportation	212	2.6	7.4	7.1	n.a.	n.a.
411,13,14 (pts)	Bus carriers, class I	15	-1.3	-4.3	n.a.	n.a.	n.a.
4213	Trucking, except local	536	3.2	2.7	n.a.	n.a.	n.a.
4213 (pt)	Trucking, ex. local, general freight	329	4.0	3.0	n.a.	n.a.	n.a.
43	United States Postal Service ⁷	843	.6	1.1	.5	-5	-1
4512,13,22 (pts)	Air transportation	595	5.6	1.9	3.1	5.5	2.5
4612,13	Petroleum pipelines	15	.7	.5	2.8	3.5	8.9
Utilities							
481	Telephone communications	915	6.8	5.4	5.0	4.7	2.1
491,2,3	Gas and electric utilities	725	.6	-2	3.8	2.8	6.0
491,3 (pt)	Electric utilities	545	1.2	1.3	4.2	5.1	6.5
492,3 (pt)	Gas utilities	180	-.5	-3.6	2.2	-4.5	3.6
Trade							
5093	Scrap and waste materials	156	5.0	1.8	2.0	-1.6	1.1
525	Hardware stores	182	2.7	1.1	-.7	7.3	-7.1
531	Department stores	2,348	3.3	2.2	2.7	2.0	.5
533	Variety stores	141	-3.1	1.9	1.0	-5.8	-.7
54	Food stores	3,515	-.6	-.8	-1.0	-.3	-1.7
541	Grocery stores	3,082	-.4	-1.1	-.7	-.5	-1.1
546	Retail bakeries	200	-1.8	-2.0	-1.2	0	-1.2
551	New and used car dealers	996	2	1.9	.2	.8	-1.1
553	Auto and home supply stores	395	2.0	2.3	.8	4.1	3.7
554	Gasoline service stations	669	3.6	3.1	3.0	2.3	3.7
56	Apparel and accessory stores	1,185	2.0	2.3	3.7	3.4	7.0
561	Men's and boys' clothing stores	89	1.0	2.9	1.7	4.5	1.4
562	Women's clothing stores	349	3.6	3.0	4.0	1.6	4.1
565	Family clothing stores	331	-.2	3.0	4.1	3.0	11.7
566	Shoe stores	208	1.9	1.4	3.1	8.8	2.7
57	Home furniture, furnishings, and equipment stores	1,046	2.0	3.3	5.7	6.6	7.4
571	Furniture and homefurnishings stores	561	1.4	1.1	2.6	1.9	4.9
572,3	Appliance, radio, television, and computer stores	486	3.0	6.5	9.2	12.0	9.3
572	Household appliance stores	66	3.4	3.2	3.1	1.1	3.5
573	Radio, television, and computer stores	400	2.5	7.8	10.1	13.4	9.6
58	Eating and drinking places	7,573	-.6	-.2	-.3	-1.6	.8
591	Drug stores and proprietary stores	618	1.7	.2	-.2	-1.0	-.9
592	Liquor stores	141	-.9	1.4	-.2	-1.8	5.8
594	Miscellaneous shopping goods stores	1,069	3.2	1.2	2.4	4.1	5.4

See footnotes at end of tables.

Table 1. Selected Industries: Employment and annual rates of change in output per hour, selected periods—Continued

SIC Code	Industry	1995 Employment ¹ (thousands)	Annual percent change in output per hour ²				
			Long-term trends		Current trends		
			1973-79	1979-90	1990-95	1993-94	1994-95
Finance and services							
602	Commercial banks	1,467	.6	2.0	3.5	.0	4.1
701	Hotels and motels	1,631	1.2	-1.2	3.4	3.9	2.0
721	Laundry, cleaning, and garment services	499	-1	-8	.8	2.0	3.1
723,4	Beauty and barber shops	784	1.5	.8	1.9	4.1	3.6
723	Beauty shops	722	.7	.7	1.6	4.8	3.7
753	Automotive repair shops	826	-.7	.2	1.7	7.3	5.4

n.a. = not available.

¹Employment figures are based primarily on data from the BLS Current Employment Statistics (CES) program and the Current Population Survey (CPS). Data on proprietors and unpaid family workers from the CPS are included in the figures for most trade and services industries and, as a result, these figures will differ from those published by the CES program, which covers payroll employment exclusively.

²Output per employee hour is measured in all cases except: (1) output per employee is used for SIC 4213, SIC 4213 (part), and SIC 4512, 13, 22 (parts); and (2) output per hour of all persons is used for all trade and services industries except SIC 531 and SIC 551.

³1977 to 1979.⁴1982 to 1990.⁵1990 to 1993.⁶1979 to 1989.

⁷Employee hours in SIC 43 are based on the number of full-time equivalent (FTE) employee years, as reported in the U.S. Postal Service budget. FTE employee years are computed by dividing total hours of full-time, part-time, and intermittent workers by the number of hours in a standard work year.

**Table 2. Iron mining, usable ore (SIC 101): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	48.8	48.2	155.9	319.2	323.3	340.6	268.8
1973	50.8	52.0	160.5	355.6	347.2	369.2	275.1
1974	47.1	50.0	174.9	371.0	350.1	375.1	268.8
1975	48.9	49.7	171.8	351.6	345.8	365.7	281.5
1976	48.2	48.8	175.9	365.1	360.2	381.4	293.9
1977	41.6	43.0	122.1	293.5	283.9	280.9	291.9
1978	49.0	51.2	182.1	371.8	355.9	376.9	287.8
1979	50.9	52.7	192.3	377.7	364.9	382.8	306.6
1980	51.0	48.9	155.3	304.6	317.7	321.3	306.6
1981	53.9	52.6	163.3	302.7	310.3	315.4	293.9
1982	40.5	39.7	77.1	190.5	194.2	173.9	243.9
1983	56.8	54.4	82.5	145.3	151.5	132.7	212.7
1984	70.0	66.9	112.2	160.4	167.8	159.6	193.9
1985	76.1	74.7	105.5	138.7	141.2	138.5	150.0
1986	79.3	78.7	83.3	105.0	105.8	103.9	112.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.1	104.9	118.7	115.2	113.2	119.2	93.8
1989	98.4	102.6	120.6	122.6	117.6	126.9	87.5
1990	88.5	93.1	114.9	129.9	123.5	128.8	106.3
1991	85.0	87.5	114.6	134.8	130.9	130.8	131.2
1992	83.3	85.4	111.8	134.2	130.9	128.8	137.5
1993	86.9	90.8	113.5	130.6	125.0	130.8	106.3
1994	85.0	92.8	117.3	138.1	126.5	136.5	93.8
1995	95.9	102.0	126.1	131.4	123.5	134.6	87.5
Average annual percent change:							
1955-95	3.1	3.3	-3	-3.3	-3.5	-3.5	-3.0
1980-95	1.6	1.8	1.9	-2	0	.9	-3.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior, and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 3. Copper mining, recoverable metal (SIC 102): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	43.5	41.6	117.9	270.9	283.4	283.9	281.7
1973	42.4	40.3	123.3	290.5	305.7	307.8	296.4
1974	37.1	34.9	115.7	311.5	331.1	329.7	337.1
1975	38.1	35.0	103.5	271.4	295.4	285.8	333.5
1976	46.8	42.8	119.0	254.0	278.1	267.8	318.6
1977	49.4	44.2	112.7	227.9	254.7	243.9	296.4
1978	53.2	49.4	112.2	210.8	227.4	218.3	263.1
1979	48.5	47.3	119.5	246.5	252.5	243.9	285.1
1980	45.3	43.1	97.9	216.3	227.4	219.0	259.3
1981	48.3	46.8	127.7	264.3	272.6	264.9	303.9
1982	57.4	51.8	95.3	166.1	184.2	169.5	241.0
1983	64.3	59.8	85.7	133.4	143.3	128.5	200.2
1984	75.9	73.2	90.5	119.1	123.6	108.5	181.7
1985	93.6	90.7	90.0	96.2	99.3	89.5	137.1
1986	109.7	105.5	92.6	84.4	87.8	84.7	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	109.1	110.7	113.3	103.8	102.3	100.0	111.1
1989	106.5	113.0	119.0	111.7	105.3	105.7	103.7
1990	102.7	108.2	125.4	122.1	115.9	118.1	107.4
1991	100.5	106.2	128.0	127.4	120.5	124.8	103.7
1992	115.2	118.8	137.7	120.0	115.9	119.0	103.7
1993	118.1	123.7	140.5	121.8	113.6	118.1	96.3
1994	126.0	132.1	144.1	119.8	109.1	113.3	92.6
1995	120.3	126.2	144.4	120.0	114.4	116.2	107.4
Average annual percent change:							
1955-95	3.5	3.5	1.9	-1.6	-1.6	-1.7	-1.0
1980-95	3.2	3.1	2.9	-3	-3	-3	0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 4. Coal mining (SIC 12): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	68.1	66.3	65.9	96.8	99.4	105.7	71.6
1973	69.0	65.5	65.5	95.1	100.0	105.5	75.3
1974	67.2	60.2	66.7	99.3	110.9	116.6	85.5
1975	57.7	54.4	71.5	124.0	131.5	137.7	103.4
1976	56.5	53.8	74.8	132.4	139.1	145.1	112.2
1977	54.8	54.7	76.1	138.9	139.2	145.2	112.5
1978	58.4	56.5	73.1	125.3	129.5	130.7	124.3
1979	54.5	53.2	85.2	156.2	160.0	163.1	145.9
1980	61.7	59.5	90.6	146.7	152.2	154.2	143.6
1981	67.1	64.7	89.9	134.0	138.8	140.4	131.4
1982	65.6	62.5	91.3	139.2	146.2	146.4	145.6
1983	75.0	71.2	85.2	113.6	119.6	117.7	128.0
1984	83.4	80.8	97.6	117.0	120.8	119.7	125.7
1985	85.1	83.2	96.3	113.2	115.8	115.6	116.6
1986	92.4	89.2	97.0	105.0	108.7	108.8	108.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	110.5	111.0	103.4	93.6	93.2	93.1	93.6
1989	116.4	120.1	106.7	91.6	88.8	87.8	93.2
1990	118.3	123.6	111.9	94.6	90.5	89.6	94.6
1991	122.1	129.4	108.3	88.7	83.7	83.1	86.8
1992	132.7	138.5	108.5	81.8	78.4	77.8	80.7
1993	140.4	148.0	99.4	70.8	67.1	65.3	75.3
1994	147.3	158.3	109.4	74.3	69.1	68.1	73.6
1995	153.9	163.9	106.9	69.4	65.2	64.5	68.2
Average annual percent change:							
1955-95	3.4	3.9	1.6	-1.7	-2.1	-2.5	5
1990-95	5.4	5.8	-9	-6.0	-6.3	-6.4	-6.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S.

Department of Energy, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 5. Bituminous coal and lignite mining (SIC 122): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	68.1	66.2	65.0	95.5	98.3	104.6	70.5
1973	69.0	65.4	64.7	93.7	98.9	104.5	74.5
1974	67.2	59.8	65.9	98.1	110.2	115.9	84.9
1975	57.5	54.1	70.8	123.2	131.0	137.4	102.5
1976	56.3	53.5	74.2	131.7	138.6	144.8	111.2
1977	54.7	54.4	75.5	136.2	138.9	145.0	111.9
1978	58.3	56.2	72.7	124.6	129.3	130.5	124.1
1979	54.4	53.0	84.8	155.8	160.0	163.2	145.7
1980	61.6	59.2	90.0	146.2	152.1	154.0	143.5
1981	67.6	64.6	89.4	133.4	138.4	140.0	131.3
1982	65.7	62.4	91.1	138.6	146.0	146.0	145.7
1983	75.0	71.2	85.0	113.4	119.3	117.4	127.7
1984	83.4	80.8	97.4	116.8	120.6	119.6	125.2
1985	84.8	83.0	96.0	113.2	115.7	115.6	115.8
1986	92.5	89.2	96.8	104.7	108.5	108.7	107.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	111.6	111.7	103.4	92.7	92.6	92.6	92.4
1989	117.2	120.3	105.8	91.1	88.8	87.8	92.8
1990	118.7	123.7	112.1	94.4	90.6	89.8	94.2
1991	122.4	129.6	108.4	88.6	83.7	83.1	86.3
1992	133.0	138.8	108.6	81.6	78.2	77.7	80.6
1993	141.2	148.7	99.3	70.3	66.7	64.7	75.5
1994	148.1	158.5	109.3	73.8	69.0	68.0	73.4
1995	154.1	164.0	106.7	69.2	65.1	64.5	67.6
Average annual percent change:							
1955-95	3.3	3.8	1.9	-1.4	-1.8	-2.2	9
1990-95	5.4	5.8	-1.0	-6.0	-6.4	-6.4	-6.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S.

Department of Energy, Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 6. Crude petroleum and natural gas (SIC 131): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	168.4	169.3	118.7	70.5	70.1	73.2	67.1
1973	173.5	171.5	116.8	67.3	68.1	69.7	66.5
1974	161.5	157.6	111.2	68.9	70.6	71.1	70.2
1975	142.8	138.8	105.5	73.9	76.0	77.9	74.0
1976	131.9	130.7	103.2	78.2	78.9	82.9	75.2
1977	125.0	125.3	104.2	83.4	83.2	86.5	80.0
1978	119.7	120.3	107.6	89.9	89.5	89.8	89.2
1979	110.3	110.5	107.3	97.3	97.1	93.5	100.3
1980	97.2	97.1	107.1	110.2	110.3	102.5	117.4
1981	83.0	83.4	106.4	128.2	127.6	114.5	140.1
1982	78.1	78.4	104.7	134.0	133.5	124.7	141.8
1983	77.2	78.4	101.5	131.4	129.5	122.1	136.3
1984	81.9	82.9	105.8	129.2	127.6	119.2	135.6
1985	83.0	84.0	104.1	125.5	124.0	117.0	130.6
1986	90.3	92.2	101.0	111.8	109.6	107.1	112.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.9	101.3	99.6	98.7	98.4	99.5	97.5
1989	98.0	99.5	98.3	98.2	98.7	98.2	97.2
1990	96.9	96.9	95.3	98.3	96.3	96.4	96.2
1991	97.9	99.3	95.6	97.7	96.3	99.3	93.5
1992	102.1	102.8	94.1	92.1	91.5	95.6	87.7
1993	105.9	107.5	92.4	87.2	85.9	87.2	84.6
1994	112.4	114.1	93.0	82.7	81.5	83.0	83.0
1995	120.5	122.0	91.8	76.2	75.2	82.8	68.0
Average annual percent change:							
1959-95	.8	.8	.3	-5	-5	-1.0	1
1980-95	4.5	4.3	.7	-5.0	-4.8	-3.0	-6.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S.

Department of Energy; the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 7. Nonmetallic minerals, except fuels (SIC 14): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	82.1	81.5	86.1	104.8	105.6	110.5	89.3
1973	86.5	87.8	94.7	109.5	107.8	112.6	91.7
1974	83.4	84.1	93.1	111.6	110.7	115.4	94.9
1975	81.0	79.4	84.2	103.9	106.0	109.0	95.9
1976	86.1	84.8	88.3	102.5	104.1	107.1	94.9
1977	89.7	89.2	93.9	104.7	105.3	108.7	94.9
1978	94.3	94.1	101.2	107.4	107.6	111.3	95.6
1979	92.6	92.8	104.4	117.8	112.5	116.3	100.0
1980	86.9	84.8	94.5	108.7	111.5	113.7	105.0
1981	85.6	82.2	88.6	103.4	107.7	107.6	109.0
1982	80.8	77.1	76.9	95.1	99.7	98.3	104.3
1983	88.5	85.8	81.3	91.9	94.8	93.3	99.6
1984	94.0	93.2	91.9	97.8	98.6	97.8	101.0
1985	95.1	93.9	94.0	98.9	100.1	99.0	103.3
1986	95.1	93.9	93.5	98.3	99.6	98.7	102.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.0	101.5	103.1	102.1	101.8	101.1	103.5
1989	99.6	100.1	101.2	101.6	101.1	100.2	103.9
1990	101.4	101.0	101.3	99.9	100.3	98.7	105.5
1991	98.5	98.3	91.4	92.8	95.0	92.3	103.9
1992	103.0	101.3	93.1	91.0	92.5	89.8	101.6
1993	100.8	101.7	93.8	93.1	92.3	90.4	98.4
1994	104.4	105.3	100.2	95.9	94.2	92.7	99.2
1995	103.0	104.9	100.9	97.9	95.2	95.1	99.6
Average annual percent change:							
1959-95	1.9	2.0	1.8	-1	-2	-5	0
1980-95	.3	.8	.1	-4	-8	-7	-1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 8. Crushed and broken stone (SIC 142): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	71.2	69.7	75.2	105.6	108.0	113.1	87.7
1973	78.6	79.0	86.7	110.3	109.7	114.6	90.2
1974	76.8	76.8	85.8	111.8	111.7	115.9	95.1
1975	76.3	72.8	75.3	98.6	103.4	106.4	91.4
1976	78.2	75.5	75.2	95.1	99.6	103.2	85.3
1977	83.7	81.0	80.2	95.8	99.0	103.6	81.7
1978	90.6	88.9	87.8	97.0	98.8	104.3	78.0
1979	89.6	88.9	92.2	102.9	101.7	109.7	80.4
1980	84.7	81.4	81.5	96.2	100.1	104.9	81.7
1981	81.0	75.9	71.3	88.1	94.0	96.3	85.3
1982	78.8	73.9	64.5	81.8	87.2	87.0	87.8
1983	86.9	82.7	70.4	81.1	85.2	84.2	89.0
1984	88.4	86.6	77.5	87.7	89.5	89.6	89.0
1985	87.1	85.9	81.8	93.9	95.2	96.9	89.0
1986	87.4	86.3	83.6	95.7	96.9	98.2	92.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.3	101.1	103.6	102.3	102.5	101.3	107.3
1989	98.7	98.3	101.8	103.1	103.5	102.5	107.3
1990	102.2	100.3	102.8	100.6	102.5	99.7	113.4
1991	99.8	95.1	92.0	92.1	96.7	92.4	113.4
1992	105.0	101.1	96.0	91.4	95.0	91.4	108.5
1993	103.6	103.8	99.6	96.1	96.0	94.3	102.4
1994	106.7	109.7	108.6	99.9	99.0	98.8	107.3
1995	105.5	106.7	107.0	101.5	100.3	98.7	106.1
Average annual percent change:							
1987-95	2.4	2.6	2.5	.1	.0	-.3	1.0
1990-95	.6	1.2	.8	2	-.4	-.2	-.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 9. Red meat products (SIC 2011, 2013): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	73.9	73.8	79.2	107.2	107.3	126.9	108.9
1973	72.7	72.1	73.8	101.5	102.3	100.7	108.4
1974	72.1	72.8	78.1	106.2	107.3	105.6	114.0
1975	71.3	71.1	74.7	104.7	105.0	102.9	113.2
1976	76.8	77.1	81.9	106.7	106.2	104.1	114.0
1977	83.2	82.8	89.4	107.4	107.9	106.4	113.6
1978	83.6	82.8	88.2	105.5	106.6	105.5	111.0
1979	85.0	84.8	87.9	103.4	103.6	103.0	106.0
1980	89.7	88.6	91.2	101.7	102.9	102.8	103.5
1981	93.2	92.3	93.1	99.9	100.9	101.3	99.4
1982	95.3	94.1	97.9	95.4	97.7	97.8	97.2
1983	98.4	97.4	92.8	95.4	96.3	95.9	97.8
1984	100.0	98.5	95.6	95.6	97.1	97.4	95.7
1985	102.2	101.1	97.0	94.9	95.9	96.2	94.6
1986	101.4	99.8	95.6	94.3	95.8	96.7	92.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.6	102.8	105.3	102.6	102.4	102.4	102.3
1989	99.7	99.8	103.6	103.9	103.9	103.9	103.7
1990	96.3	96.4	100.5	104.3	104.3	105.1	101.2
1991	98.3	98.2	102.0	103.8	103.9	105.8	98.3
1992	104.0	104.6	109.4	105.1	104.5	105.7	100.0
1993	104.5	105.0	111.1	106.3	105.7	107.2	100.0
1994	100.8	104.9	111.0	110.1	105.8	108.0	97.0
1995	102.5	105.4	114.4	111.6	108.5	110.5	100.5
Average annual percent change:							
1987-95	1.5	1.8	1.6	.1	.0	.2	.8
1990-95	1.3	1.8	2.6	1.4	-.8	1.0	-.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

**Table 10. Meat packing plants (SIC 2011): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	63.4	63.5	81.4	128.4	128.3	124.8	146.4
1973	65.1	64.6	77.4	118.9	119.8	115.3	142.7
1974	63.1	63.7	81.1	128.6	127.4	122.9	150.5
1975	63.4	62.9	78.3	123.6	124.5	120.0	147.7
1976	67.8	67.9	85.8	126.6	126.4	121.5	151.4
1977	72.1	72.0	91.5	126.8	127.1	122.2	152.3
1978	73.7	73.1	91.0	123.4	124.4	119.7	148.2
1979	75.0	74.9	90.2	120.2	120.4	116.6	139.5
1980	78.4	77.8	92.5	118.0	118.9	116.1	133.2
1981	84.2	83.6	96.1	114.1	114.9	112.6	126.4
1982	86.6	85.9	93.6	108.1	109.0	106.9	120.0
1983	90.8	90.0	95.5	105.2	106.1	103.2	121.4
1984	93.6	92.1	98.5	105.2	107.0	105.5	114.5
1985	98.3	97.1	100.8	102.6	103.8	103.0	108.2
1986	96.7	97.0	98.9	100.2	101.9	101.9	101.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.9	100.7	103.4	102.5	102.7	102.8	102.3
1989	97.9	97.3	99.5	101.6	102.2	102.3	101.8
1990	95.8	95.8	97.0	100.2	101.2	101.9	97.3
1991	100.2	98.8	99.3	99.1	100.4	102.3	90.9
1992	104.5	104.1	104.9	100.4	100.8	101.4	97.7
1993	105.1	104.1	106.4	101.2	102.2	102.7	99.5
1994	101.0	104.8	106.7	105.6	101.8	102.7	98.8
1995	101.7	105.0	109.4	107.6	104.2	104.8	101.4
Average annual percent change:							
1987-95	1.0	1.9	2.4	1.4	6	6	8
1990-95							

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

**Table 11. Sausages and other prepared meats (SIC 2013): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	77.4	76.6	57.7	74.5	75.3	75.4	74.9
1973	67.2	66.1	50.0	74.4	75.7	75.1	77.4
1974	74.8	74.3	57.1	76.3	76.9	75.3	81.1
1975	71.5	71.0	53.6	75.0	75.5	73.1	81.9
1976	80.8	80.8	61.0	75.5	75.5	73.7	80.2
1977	97.2	95.2	74.9	77.1	78.7	78.7	78.6
1978	91.7	89.2	71.1	77.5	79.7	80.5	77.4
1979	92.8	91.4	71.5	77.0	78.2	79.1	75.7
1980	100.6	97.7	77.0	76.5	78.8	79.6	76.5
1981	93.4	91.0	72.6	77.7	79.7	81.5	74.9
1982	95.3	92.6	74.5	78.1	80.4	81.9	76.5
1983	98.7	97.0	78.8	79.9	81.3	83.2	76.5
1984	99.3	97.3	79.8	80.3	82.0	83.3	78.6
1985	97.8	96.8	81.0	82.8	83.7	84.2	82.3
1986	98.6	97.0	84.0	85.2	86.6	87.8	83.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	107.1	107.9	109.9	102.6	101.9	101.7	102.4
1989	105.9	107.3	114.4	108.0	106.7	107.0	105.7
1990	97.4	99.3	108.8	111.6	109.6	111.1	105.2
1991	95.9	97.7	107.3	111.9	109.8	112.6	101.9
1992	104.8	107.1	118.7	113.4	110.8	113.8	102.4
1993	105.0	108.3	121.0	115.2	111.7	115.7	100.5
1994	101.4	105.4	119.8	118.1	112.6	118.1	97.1
1995	105.3	107.9	125.0	118.7	115.8	121.7	99.5
Average annual percent change:							
1987-95	1.1	1.2	3.5	2.3	2.3	2.5	1.5
1990-95	1.6	1.7	2.8	1.2	1.1	1.8	-1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

**Table 12. Poultry dressing and processing plants (SIC 2015): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	65.7	67.9	42.4	63.5	62.4	63.7	52.5
1973	58.0	58.1	37.8	65.2	65.1	66.4	54.3
1974	66.9	66.8	43.4	64.9	65.0	65.1	63.6
1975	67.6	65.9	41.1	60.8	62.4	62.1	64.9
1976	70.0	74.3	48.8	64.2	65.7	64.9	72.2
1977	76.9	74.4	49.3	64.1	66.3	66.6	64.2
1978	78.2	76.0	52.6	67.3	69.3	70.4	59.3
1979	81.7	80.3	59.0	72.2	73.5	74.2	68.5
1980	81.6	79.3	63.2	77.4	79.7	80.2	75.3
1981	89.5	85.8	69.5	77.7	81.0	82.7	66.6
1982	97.1	95.1	75.8	78.1	79.7	80.8	71.6
1983	100.9	99.5	78.2	77.5	78.6	79.4	72.8
1984	99.1	97.9	74.3	75.0	75.9	76.4	72.2
1985	100.5	99.5	78.5	78.1	78.9	79.9	70.9
1986	95.6	93.5	82.1	85.9	87.8	87.8	88.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	96.2	99.7	104.6	108.7	105.0	104.8	106.8
1989	105.2	109.9	121.4	115.5	110.5	110.5	109.9
1990	108.6	110.1	127.7	117.6	116.0	115.5	120.5
1991	115.4	115.7	137.3	118.9	118.6	117.5	129.8
1992	119.6	119.9	146.6	122.6	122.3	120.8	136.6
1993	119.8	121.0	153.6	128.2	126.9	125.1	144.7
1994	119.4	122.3	160.7	134.5	131.4	128.7	157.1
1995	122.5	124.3	170.6	139.2	137.3	134.5	162.4
Average annual percent change:							
1987-95	2.3	2.4	5.9	3.5	3.4	3.2	4.6
1990-95	2.4	2.5	6.0	3.4	3.4	3.1	6.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 13. Dairy products (SIC 202): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	58.2	58.1	78.4	134.7	134.9	110.8	172.7
1973	60.0	60.1	77.5	129.2	129.0	107.3	163.1
1974	62.9	63.1	78.7	125.1	124.7	104.7	156.1
1975	66.5	66.8	80.5	121.1	120.5	101.2	151.0
1976	68.4	68.6	81.5	119.1	118.6	100.8	146.9
1977	69.6	70.3	82.2	118.1	116.8	100.3	142.6
1978	71.6	71.6	81.7	114.1	114.2	98.9	138.2
1979	73.2	72.9	81.7	111.6	112.0	98.8	132.0
1980	76.7	76.9	83.6	109.0	108.8	98.2	125.8
1981	82.6	82.1	86.8	105.1	105.7	95.8	121.3
1982	85.1	84.5	87.6	102.9	103.7	95.7	116.1
1983	89.4	88.8	91.0	101.8	102.4	96.3	112.0
1984	89.9	89.4	90.9	101.1	101.7	97.0	108.9
1985	92.6	93.0	94.0	101.3	101.1	96.2	105.8
1986	96.5	96.3	97.3	100.8	101.0	97.4	103.5
1987	100.0	100.0	100.0	100.0	100.0	-	100.0
1988	104.7	104.2	102.7	98.1	98.6	-	99.7
1989	104.9	104.4	102.1	97.4	97.8	-	97.6
1990	105.4	105.3	101.8	96.6	96.7	97.2	95.8
1991	108.2	108.1	104.5	98.6	98.7	97.8	95.0
1992	112.1	112.8	107.8	96.2	95.5	97.7	92.2
1993	110.3	111.4	106.1	96.2	95.2	96.7	89.8
1994	112.5	114.1	105.3	93.6	92.3	96.2	86.1
1995	115.6	117.8	108.7	94.1	92.3	97.4	84.2
Average annual percent change:							
1987-95	3.7	3.7	1.5	-2.1	-2.1	-1.0	-3.5
1990-95	1.9	2.3	1.3	-5	-5	0	-2.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

Statistics; and the National Agricultural Statistics Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of Labor Statistics.

SOURCE: Output based on data from the Bureau of the Census; the Bureau of Labor

**Table 14. Cheese, natural and processed (SIC 2022): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	51.5	72.8	48.6	67.9	66.7	70.0	55.4
1973	72.1	73.6	49.9	69.2	67.7	70.9	56.4
1974	77.3	79.7	55.0	71.2	69.1	71.3	61.7
1975	79.1	82.0	56.3	71.2	68.7	69.7	64.9
1976	79.3	81.7	60.5	76.2	74.0	74.8	71.3
1977	76.1	78.6	59.7	78.4	75.9	76.7	73.5
1978	75.1	76.0	60.0	79.8	78.9	79.4	76.6
1979	75.1	75.5	62.5	83.2	82.8	83.6	79.8
1980	79.3	79.7	69.4	87.5	87.1	87.1	87.3
1981	88.9	88.9	77.4	87.1	87.1	86.1	90.4
1982	90.3	90.1	80.0	88.6	88.8	88.8	95.7
1983	86.8	86.2	80.4	92.6	93.2	92.1	96.8
1984	85.1	85.2	80.2	94.3	94.2	92.7	98.9
1985	88.2	88.6	84.7	96.0	95.6	95.9	94.7
1986	93.5	93.3	91.1	97.4	97.6	96.5	101.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.8	99.8	101.5	101.7	101.9	100.6	106.4
1989	102.6	102.6	104.6	101.9	101.9	101.3	104.3
1990	108.2	108.4	109.2	100.9	100.7	100.6	101.1
1991	114.6	115.5	115.7	101.0	100.2	100.6	98.9
1992	121.8	123.5	122.0	100.2	98.8	104.3	93.6
1993	115.5	117.6	115.9	100.4	98.5	102.8	84.0
1994	117.5	119.5	114.5	97.5	95.9	100.9	78.7
1995	120.5	124.8	120.9	109.3	96.8	102.2	78.7
Average annual percent change:							
1972-95	2.3	4.0	-0.5	-0.1	1.7	1.7	1.7
			-2.1	-1.1	-0.8	3	-4.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 15. Fluid milk (SIC 2026): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	51.7	51.2	96.5	186.7	188.4
1973	54.6	54.4	95.8	175.5	176.3
1974	55.7	55.4	93.1	167.1	167.9
1975	59.8	59.4	96.0	161.0	161.5
1976	61.4	61.0	95.8	156.1	157.0
1977	61.7	62.3	95.4	154.6	153.2
1978	65.3	65.0	95.1	145.6	146.3
1979	70.0	69.4	95.0	135.7	136.9
1980	74.8	74.2	94.8	126.8	127.7
1981	78.2	77.1	94.0	120.2	122.0
1982	81.1	79.9	93.6	115.5	117.2
1983	85.5	84.6	95.1	111.2	112.4
1984	88.9	88.1	97.0	109.1	110.1
1985	92.0	91.9	99.3	107.9	108.1
1986	98.0	95.9	100.2	104.4	104.5
1987	100.0	100.0	100.0	100.0	100.0
1988	102.3	101.7	98.1	95.8	96.5
1989	103.7	103.0	97.4	93.9	94.6
1990	103.3	102.4	95.2	92.1	92.9
1991	104.3	103.4	94.4	90.5	91.3
1992	104.0	104.3	93.0	89.4	89.1
1993	107.1	107.3	93.2	87.0	86.9
1994	112.9	113.3	94.1	83.4	83.1
1995	115.8	116.3	95.2	83.1	82.7
Average annual percent change:					
1988-95	4.0	4.0	-6	-0.3	-3.3
1990-95	2.3	2.6	-2	-2.0	-2.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Economic Research Service, U.S. Department of Agriculture, and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 16. Preserved fruits and vegetables (SIC 203): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	70.1	70.9	75.7	108.0	106.8	110.6	89.2
1973	70.0	76.8	82.2	106.1	107.1	110.0	93.7
1974	75.0	75.9	79.7	106.4	105.0	109.3	84.9
1975	77.2	77.3	78.5	101.7	101.8	105.7	82.0
1976	82.4	81.2	82.2	99.8	101.3	105.3	82.8
1977	82.2	82.4	88.5	107.6	107.4	110.1	95.0
1978	84.3	83.9	92.5	110.2	110.8	114.5	94.4
1979	81.0	81.1	90.6	111.9	111.7	114.4	99.7
1980	82.9	84.3	90.3	106.9	107.1	108.3	101.7
1981	81.5	82.6	86.0	105.5	104.1	105.9	96.5
1982	88.5	87.9	88.5	100.0	100.8	101.1	98.1
1983	91.9	92.1	90.5	98.4	98.2	98.3	97.8
1984	92.6	92.9	93.2	100.6	100.3	101.2	96.1
1985	94.3	92.7	93.8	99.5	101.2	101.5	100.0
1986	98.9	96.2	97.3	98.4	101.1	101.0	101.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.4	97.8	99.7	102.3	101.9	101.0	105.9
1989	98.3	100.4	105.3	107.2	105.0	104.8	106.6
1990	96.2	99.5	105.9	110.0	106.4	107.5	101.0
1991	99.9	103.1	111.6	111.7	108.2	109.9	100.0
1992	101.3	104.1	111.0	109.6	106.6	108.8	96.3
1993	107.2	109.7	116.3	108.4	106.0	107.4	99.0
1994	108.0	111.9	118.5	109.7	105.9	107.2	100.0
1995	111.5	114.4	119.5	107.1	104.4	105.5	99.3
Average annual percent change:							
1947-95	2.7	2.7	3.1	4	4	2	1.4
1990-95	3.0	2.8	2.4	-5	-4	-4	-3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 17. Canned fruits and vegetables (SIC 2033): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	63.9	63.7	87.8	137.4	137.9	141.9	114.8
1973	70.1	70.1	95.5	136.2	136.2	140.4	110.3
1974	70.3	70.8	92.9	132.1	131.2	138.6	88.6
1975	70.8	71.2	91.5	129.3	128.5	135.0	90.8
1976	77.9	74.8	94.4	121.2	126.2	132.2	82.8
1977	75.9	75.2	95.5	125.9	127.0	131.0	104.2
1978	77.5	75.2	95.8	123.3	127.1	131.8	100.0
1979	77.5	78.3	99.3	126.1	126.8	128.7	114.8
1980	77.8	78.3	95.9	123.3	122.5	123.2	119.8
1981	76.7	75.9	91.4	119.1	120.3	122.9	104.2
1982	81.6	81.4	88.1	108.0	108.3	109.4	102.0
1983	86.8	86.4	86.8	99.7	100.2	100.2	100.0
1984	87.4	86.9	92.3	105.6	106.2	105.5	106.4
1985	92.8	91.2	94.7	102.1	103.9	103.3	107.2
1986	99.1	94.4	97.9	98.8	103.7	103.5	104.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.7	99.7	102.1	103.5	102.4	101.9	104.4
1989	92.9	96.1	104.1	112.1	106.3	109.7	101.5
1990	91.8	98.2	108.0	115.1	110.1	113.1	94.8
1991	100.1	103.8	115.0	114.9	110.8	113.6	97.0
1992	101.5	105.5	111.9	110.2	106.1	107.8	97.8
1993	106.8	110.7	113.0	106.1	102.1	102.4	100.7
1994	101.5	106.9	108.9	107.3	101.9	101.8	102.7
1995	109.3	113.2	109.3	100.0	98.5	95.5	101.5
Average annual percent change:							
1988-95	2.8	2.9	1.4	-1.4	-1.5	-1.6	-1.7
1990-95	3.1	2.9	2	-0.8	-2.6	-3.3	1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 18. Frozen fruits and vegetables (SIC 2037): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	74.6	80.0	68.8	90.2	86.0	87.9	74.1
1973	77.9	83.0	73.5	94.3	88.5	89.5	82.8
1974	81.7	86.1	76.6	93.8	89.0	91.2	75.6
1975	85.7	89.6	77.1	85.9	86.0	88.1	72.8
1976	96.6	101.7	82.2	83.4	80.8	82.3	72.8
1977	88.2	90.6	85.2	98.6	94.0	97.0	75.6
1978	94.8	101.3	94.4	99.6	93.2	96.3	74.1
1979	85.1	84.9	88.5	104.0	104.2	106.8	88.6
1980	87.0	93.4	90.1	103.6	98.5	96.3	97.2
1981	84.5	90.3	88.6	104.9	98.1	99.8	87.2
1982	94.4	97.5	92.4	98.9	95.8	97.0	88.6
1983	102.1	101.3	98.3	94.3	95.0	95.6	91.4
1984	99.7	100.7	94.9	95.2	94.2	96.3	81.4
1985	95.2	94.8	87.7	92.1	92.5	94.0	84.2
1986	103.3	99.9	93.1	90.1	93.2	93.7	90.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	94.0	94.2	95.8	101.9	101.6	101.2	105.0
1989	98.0	100.0	103.1	105.2	103.1	103.5	100.0
1990	90.0	92.9	96.1	106.8	103.5	102.6	110.0
1991	94.6	97.4	100.4	106.1	103.1	107.3	108.3
1992	96.4	99.8	101.4	105.1	101.6	101.6	121.7
1993	102.8	106.1	108.0	105.1	101.8	101.4	105.0
1994	109.3	113.5	114.4	104.7	100.8	103.5	103.3
1995	111.1	115.7	120.4	108.4	104.1	103.7	106.7
Average annual percent change							
1972-95	1.7	1.8	2.5	7	.8	.7	1.6
1990-95	4.1	4.5	4.6	3	.1	.2	.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 19. Grain mill products (SIC 204): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	57.6	58.4	65.5	113.7	112.1	115.6	104.1
1973	53.5	55.8	61.9	115.7	111.0	115.1	102.6
1974	57.1	57.1	65.5	114.7	114.7	118.7	105.6
1975	57.3	57.7	66.2	115.5	114.8	119.3	105.3
1976	59.9	60.0	69.3	115.7	115.4	118.4	106.1
1977	66.8	65.8	74.8	112.0	113.6	117.2	106.1
1978	66.0	65.1	76.1	115.5	116.9	119.7	110.6
1979	67.4	67.3	77.4	114.0	115.0	119.4	105.8
1980	70.9	70.3	80.6	113.7	114.7	118.3	107.0
1981	75.0	75.4	83.1	110.8	110.2	112.3	105.0
1982	81.5	79.5	86.0	105.5	106.2	110.1	104.1
1983	83.5	81.7	87.1	104.4	106.7	108.4	103.0
1984	87.8	85.5	88.2	100.5	103.2	104.0	101.9
1985	90.5	90.2	90.3	97.6	100.1	99.5	100.8
1986	95.5	94.4	92.3	95.6	97.7	97.0	99.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.0	100.9	101.8	101.6	100.7	101.6	98.8
1989	101.9	103.6	106.4	106.4	104.7	103.1	108.0
1990	108.0	107.8	110.1	103.9	102.1	102.6	101.2
1991	106.7	108.0	111.0	104.1	102.7	103.7	100.8
1992	104.4	107.0	112.2	107.5	104.9	105.4	103.7
1993	106.4	112.7	118.6	106.5	103.4	105.1	98.7
1994	110.5	114.1	118.4	105.3	102.1	103.1	98.7
1995	116.7	121.2	125.3	107.4	103.4	105.7	98.5
Average annual percent change							
1983-95	3.1	3.2	2.9	-2	-3	-3	-3
1990-95	1.9	2.4	2.6	.7	.3	.6	.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Data A based on data from the Bureau of the Census; Agric. & Rural Marketing

Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 20. Flour (including flour mixes) and other grains (SIC 2041, 2045): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	72.5	75.0	81.9	113.0	109.2	111.7	102.9
1973	72.0	75.2	85.9	119.3	114.2	118.7	102.9
1974	77.3	77.5	88.9	114.9	114.6	119.3	102.9
1975	76.5	76.7	90.3	118.1	117.8	119.8	102.6
1976	76.1	76.8	89.8	117.9	116.9	114.8	102.3
1977	83.8	84.1	91.8	120.5	109.2	108.4	111.1
1978	81.7	82.8	90.6	110.9	109.7	110.5	107.9
1979	78.3	81.5	88.6	113.2	108.8	109.9	106.2
1980	80.2	81.4	87.4	109.0	107.4	109.0	102.9
1981	80.6	82.7	88.1	109.3	106.5	107.9	102.9
1982	93.1	90.5	90.2	96.9	99.6	102.8	91.7
1983	95.6	92.6	95.2	99.6	99.6	100.5	97.2
1984	96.8	91.4	91.6	94.6	96.0	96.4	90.4
1985	97.0	95.3	90.8	93.8	95.3	96.1	93.0
1986	97.8	96.0	93.0	95.0	96.8	97.7	94.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.1	102.3	102.3	101.2	100.0	100.6	98.6
1989	90.0	101.2	102.4	103.5	101.2	99.4	105.5
1990	103.9	105.7	102.8	99.0	97.2	98.9	93.2
1991	105.8	107.8	106.5	100.7	98.8	100.0	95.9
1992	99.5	102.1	116.1	116.7	133.8	117.7	104.1
1993	110.2	114.6	124.1	112.4	108.3	111.0	101.4
1994	113.0	118.7	125.3	110.8	105.5	108.8	97.3
1995	110.0	115.9	126.2	116.6	110.6	114.9	100.0
Average annual percent change:							
1983-95	2.2	2.2	1.6	-6	-6	-5	-8
1980-95	1.1	1.9	4.5	3.3	2.6	3.0	1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 21. Flour and other grain mill products (SIC 2041): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	68.0	71.4	86.4	125.1	121.0	120.2	123.6
1973	68.5	70.3	89.8	131.1	127.7	128.2	126.7
1974	71.0	71.1	93.1	131.0	130.9	131.2	129.6
1975	72.4	71.9	95.5	137.0	132.9	130.3	141.3
1976	71.4	70.8	93.2	130.5	131.6	126.3	147.1
1977	84.5	84.4	98.0	117.1	117.3	114.2	126.7
1978	84.9	86.8	97.4	114.8	113.5	112.1	117.6
1979	80.5	82.8	95.2	118.2	115.0	113.1	120.6
1980	77.7	80.4	83.8	120.6	116.6	114.2	123.6
1981	78.1	80.5	85.5	122.3	118.7	117.3	123.8
1982	86.9	85.7	97.3	111.9	113.5	115.2	108.8
1983	90.8	92.1	101.8	112.4	116.6	110.1	111.9
1984	91.7	91.5	95.6	104.3	104.5	104.1	105.9
1985	95.8	95.0	95.0	99.2	100.0	99.1	102.9
1986	95.9	95.5	95.9	101.0	101.5	100.0	105.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.5	104.2	101.1	98.7	97.0	98.0	94.1
1989	102.5	104.4	100.5	98.1	98.2	93.9	102.9
1990	107.8	108.7	102.1	94.7	94.0	93.9	94.1
1991	106.3	110.3	105.3	97.2	95.5	96.0	94.1
1992	111.9	115.7	114.0	101.8	98.5	96.0	105.9
1993	122.2	125.1	126.1	103.2	100.8	100.0	102.9
1994	126.8	133.1	127.1	100.2	95.5	98.9	102.9
1995	117.6	122.6	119.9	101.8	97.7	93.0	106.8
Average annual percent change:							
1987-95	2.8	2.7	.4	-6.4	-6.3	-6.5	-1.8
1980-95	1.7	2.4	3.3	1.5	.8	.0	2.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 22. Cereal breakfast foods (SIC 2043): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	65.9	62.3	50.1	76.0	80.5	81.6	76.0
1973	65.6	65.2	53.4	81.4	81.9	84.1	72.4
1974	61.9	60.3	52.3	84.5	86.7	88.6	79.2
1975	64.9	64.7	56.1	86.5	86.7	88.6	79.2
1976	69.0	65.4	61.4	89.0	93.8	96.4	82.7
1977	69.1	67.2	68.8	99.5	102.4	105.5	89.8
1978	69.6	65.7	68.1	97.9	103.7	106.8	89.8
1979	74.2	70.4	71.7	96.7	101.9	107.6	76.0
1980	74.2	71.1	70.6	95.2	99.3	104.7	76.0
1981	75.6	72.6	70.8	93.7	97.5	102.3	76.0
1982	80.4	74.9	73.0	90.8	97.5	97.8	96.5
1983	84.2	78.9	80.4	95.5	101.9	101.7	103.5
1984	92.8	87.8	88.9	95.8	101.2	100.9	103.5
1985	97.1	92.9	94.7	97.5	101.9	101.7	103.5
1986	98.6	95.9	98.1	99.5	102.3	101.7	106.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.6	100.5	103.6	105.1	103.1	105.3	93.1
1989	95.5	99.5	103.8	108.8	104.4	104.6	103.4
1990	100.2	101.8	104.3	104.1	102.5	102.3	103.4
1991	102.3	101.0	101.7	99.3	100.6	99.2	106.9
1992	99.1	102.9	103.5	104.5	100.6	100.0	103.4
1993	95.5	96.5	106.1	111.1	110.0	109.9	110.3
1994	108.6	108.2	115.6	108.5	106.9	107.6	103.4
1995	118.4	121.4	126.7	107.0	104.4	105.3	100.0
Average annual percent change:							
1983-95	2.5	2.8	4.0	1.5	1.2	1.2	1.2
1990-95	3.4	3.6	4.0	.6	.4	.6	.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 23. Rice milling (SIC 2044): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	70.2	73.0	64.8	92.4	88.8	85.8	100.0
1973	59.3	62.4	54.1	91.3	86.7	82.9	100.0
1974	68.4	66.2	64.7	94.6	97.8	100.0	90.0
1975	65.8	66.3	65.1	98.9	97.8	100.0	90.0
1976	69.1	66.9	69.8	101.1	104.4	106.7	90.0
1977	71.9	72.6	77.4	107.6	106.6	114.3	80.1
1978	65.6	67.3	76.2	114.3	113.2	106.7	130.0
1979	69.3	68.4	83.6	120.5	122.1	117.2	140.1
1980	80.4	81.5	101.4	126.2	124.4	120.1	140.1
1981	84.9	90.4	102.3	120.5	113.2	117.2	100.0
1982	75.1	74.2	92.3	122.9	124.4	125.8	120.0
1983	72.3	71.5	85.7	118.6	119.9	117.2	130.0
1984	63.8	63.5	72.0	112.9	113.3	105.8	140.1
1985	68.6	67.1	73.0	106.5	108.8	100.0	140.1
1986	72.7	73.2	81.3	111.9	111.1	111.4	110.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	83.1	87.6	87.6	105.5	100.0	100.0	100.0
1989	97.5	100.0	108.9	111.8	108.9	106.6	110.0
1990	104.9	110.0	107.5	102.5	97.8	102.9	80.0
1991	99.3	104.2	99.6	100.3	95.6	100.0	80.0
1992	101.4	104.7	90.7	89.4	86.7	86.6	80.0
1993	129.5	135.4	117.3	90.6	86.7	91.4	70.0
1994	109.2	112.2	102.3	93.7	91.1	94.3	80.0
1995	102.6	111.8	99.4	96.8	88.9	88.6	90.0
Average annual percent change:							
1983-95	2.6	2.7	2.5	-1	-2	-1	-6
1990-95	-4	-3	-1.6	-1.1	-1.9	-2.9	2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census; Agricultural Marketing

Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 24. Wet corn milling (SIC 2046): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	26.8	25.3	35.7	133.3	140.7	142.3	137.0
1973	24.1	23.2	31.6	131.0	136.1	139.0	129.8
1974	29.9	28.7	37.0	123.9	129.0	130.4	126.0
1975	30.8	29.9	37.9	122.8	126.7	133.8	111.2
1976	34.4	33.2	42.4	123.2	127.8	135.4	111.2
1977	41.2	38.8	49.2	119.4	126.7	132.1	114.8
1978	42.7	39.5	51.0	119.4	129.0	137.1	111.2
1979	47.1	44.0	55.2	117.2	125.5	127.1	122.3
1980	55.7	51.5	64.1	115.0	124.4	128.7	114.8
1981	63.0	59.0	71.4	113.4	120.9	125.4	111.2
1982	58.7	56.1	61.9	105.6	110.5	113.5	103.7
1983	63.7	62.0	64.8	101.7	103.5	106.7	96.5
1984	74.9	73.3	71.6	95.6	97.7	100.0	92.6
1985	74.6	73.3	74.2	99.5	101.2	103.3	96.5
1986	97.3	96.9	93.6	96.2	96.6	94.9	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	96.1	96.9	104.8	109.0	108.1	101.1	122.2
1989	103.6	104.5	117.8	113.8	112.8	105.1	129.6
1990	103.8	106.6	117.8	113.4	110.5	103.4	125.9
1991	100.4	104.2	120.0	119.5	115.1	108.5	129.6
1992	101.8	108.8	116.4	114.3	107.0	103.4	114.8
1993	112.0	115.2	120.5	107.7	104.7	103.4	107.4
1994	110.0	111.9	117.1	106.5	104.7	105.1	103.7
1995	122.5	128.2	137.1	111.9	107.0	105.1	111.1
Average annual percent change:							
1963-95	5.8	6.1	4.9	- .9	-1.1	-1.4	-4
1990-95	3.4	3.8	3.1	- .3	- .6	- .3	-2.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Corn Refiners Association, the Bureau of the Census, and the Bureau of Labor Statistics.

Table 25. Prepared feeds for animals and fowls (SIC 2047, 2048): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	57.2	59.5	72.3	126.4	121.4	132.0	104.8
1973	51.6	55.5	65.5	126.6	117.8	126.7	103.7
1974	54.5	55.6	68.7	126.1	123.6	132.2	109.7
1975	54.5	55.8	68.6	125.7	122.8	132.0	108.1
1976	57.8	59.6	71.9	124.5	120.8	128.7	108.1
1977	65.8	65.8	77.8	118.3	118.3	124.7	108.1
1978	65.0	65.3	80.7	124.1	123.6	128.6	115.5
1979	66.5	67.2	81.0	121.8	120.6	128.6	108.1
1980	69.1	69.3	84.0	121.5	121.2	127.3	111.4
1981	74.0	75.6	86.5	116.9	114.4	116.6	110.8
1982	84.2	83.5	95.6	113.5	114.4	117.6	109.2
1983	85.2	83.7	93.2	109.4	111.3	115.3	104.8
1984	99.2	87.0	93.7	105.1	107.8	109.3	105.2
1985	96.9	94.6	95.6	98.6	101.0	100.5	132.2
1986	95.2	94.6	90.6	95.2	95.8	93.3	99.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.5	101.4	100.3	98.8	99.0	100.7	96.2
1989	103.7	104.2	109.2	105.2	104.8	103.7	106.5
1990	107.0	108.4	112.3	104.9	103.5	104.8	101.6
1991	108.0	109.1	113.4	105.0	104.0	107.5	98.4
1992	108.1	109.3	112.5	104.0	102.9	102.7	103.2
1993	110.7	114.0	114.0	103.0	100.0	101.4	97.8
1994	108.5	111.7	110.8	102.1	99.2	98.2	100.5
1995	115.6	118.7	118.7	102.7	100.0	102.4	96.2
Average annual percent change:							
1963-95	3.2	3.2	2.8	- .4	- .4	- .4	- .3
1990-95	1.6	1.8	1.1	- .4	- .7	- .5	-1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 26. Bakery products (SIC 205): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	82.8	84.1	95.3	115.1	113.2	118.5	106.1
1973	82.3	83.9	94.4	114.8	112.5	118.4	104.6
1974	82.0	82.0	93.1	113.6	113.6	116.2	109.9
1975	82.0	82.2	93.8	114.4	114.2	116.4	111.4
1976	82.4	83.0	96.8	117.4	116.6	120.1	112.0
1977	87.7	88.1	94.4	107.6	107.1	109.2	104.2
1978	85.8	85.8	93.8	109.4	109.3	110.2	108.2
1979	83.8	84.4	94.3	112.5	111.7	114.6	107.6
1980	82.4	83.4	92.4	112.2	110.8	115.3	104.8
1981	84.4	85.9	92.3	109.4	107.5	110.8	102.8
1982	90.3	90.2	94.3	104.4	104.5	103.1	106.5
1983	93.3	93.0	92.7	99.4	99.7	99.7	99.8
1984	93.4	93.5	94.3	101.0	100.9	100.4	101.8
1985	95.6	95.9	96.6	101.0	100.7	98.0	104.7
1986	100.1	100.6	96.3	96.2	95.7	95.7	96.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	93.4	93.3	95.3	102.1	102.2	101.7	102.8
1989	91.0	90.9	94.9	104.3	104.3	103.1	106.0
1990	93.2	93.9	91.5	98.2	97.4	101.1	92.2
1991	89.2	90.3	88.9	99.6	98.4	102.8	92.0
1992	89.4	90.7	89.8	100.5	99.0	104.2	91.6
1993	90.3	91.1	91.5	101.8	100.8	106.5	92.7
1994	91.1	93.1	94.8	104.0	101.8	107.7	93.4
1995	92.2	94.7	95.7	103.8	101.0	107.9	91.2
Average annual percent change:							
1947-95	1.3	1.2	.6	-.7	-.6	-.8	-.3
1990-95	-2	.2	.9	1.1	.7	1.3	-2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 27. Sugar (SIC 2061, 2062, 2063): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	73.4	72.2	113.9	155.2	157.7	163.5	135.4
1973	79.0	79.4	116.7	147.6	146.9	149.9	135.0
1974	79.4	81.9	119.0	149.9	145.3	150.4	124.7
1975	75.7	72.5	113.5	149.9	156.6	157.7	152.5
1976	78.7	78.2	125.3	159.3	160.2	160.1	159.8
1977	85.9	84.0	126.9	147.7	151.0	149.9	154.8
1978	85.6	82.0	118.3	137.8	144.2	143.4	147.5
1979	89.9	86.9	116.9	130.0	134.6	133.8	137.4
1980	88.6	85.1	115.5	130.3	135.7	136.3	132.4
1981	86.9	83.6	117.3	135.0	140.2	141.5	135.0
1982	77.1	73.6	96.0	127.2	133.2	132.6	135.0
1983	84.8	82.1	96.3	113.5	117.3	118.6	112.4
1984	85.7	83.2	97.6	113.9	117.3	117.9	115.0
1985	87.6	87.3	91.2	104.1	104.5	104.4	105.0
1986	80.7	82.1	93.1	102.7	101.1	100.0	105.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.1	99.0	98.1	99.0	99.1	100.6	93.9
1989	98.6	101.9	103.3	104.8	101.4	102.4	98.0
1990	104.2	108.0	104.5	100.3	98.6	99.4	95.9
1991	107.5	112.1	112.6	104.8	100.5	101.8	95.9
1992	110.9	113.7	113.2	102.1	99.5	102.4	99.8
1993	114.8	117.6	114.4	99.6	97.2	101.8	81.8
1994	117.4	122.7	112.5	95.8	91.7	95.2	79.8
1995	125.2	130.1	116.4	92.9	89.4	93.5	75.5
Average annual percent change:							
1947-95	3.4	3.4	1.5	-1.8	-1.8	-1.9	-1.3
1990-95	3.7	4.2	2.2	-1.5	-1.9	-1.2	-4.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical

Reporting Service, U.S. Department of Agriculture; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 28. Raw and refined cane sugar (SIC 2061, 2062): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	72.2	73.6	113.9	157.7	154.7	150.1	170.5
1973	78.5	79.7	121.2	154.4	152.0	150.1	159.5
1974	80.9	82.9	127.4	157.4	153.7	148.0	174.1
1975	76.5	74.8	117.5	153.6	157.1	151.3	177.9
1976	81.5	81.7	128.3	157.3	157.1	152.5	174.1
1977	93.3	90.4	140.6	150.7	155.5	150.1	174.1
1978	93.3	95.6	135.4	145.1	149.4	144.6	166.6
1979	96.4	94.2	135.1	140.2	143.5	142.3	148.1
1980	96.1	94.7	135.2	140.6	142.8	142.3	144.5
1981	95.1	93.9	138.0	145.1	147.0	147.9	144.5
1982	83.2	81.5	110.0	132.3	135.0	132.3	144.5
1983	83.1	88.6	114.9	123.4	129.7	132.3	122.3
1984	89.1	88.5	109.4	122.8	126.5	126.7	126.0
1985	96.6	94.5	101.7	105.2	107.6	107.8	107.5
1986	96.9	97.6	99.2	102.4	101.6	101.2	103.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.7	103.4	99.3	99.7	96.1	97.7	91.4
1989	101.8	109.8	108.9	107.0	99.2	101.1	94.3
1990	107.7	113.9	109.5	101.7	96.1	97.8	91.4
1991	110.3	120.1	116.4	105.5	96.9	98.9	91.4
1992	111.7	115.6	111.1	99.5	96.1	98.9	88.6
1993	120.2	126.6	110.8	92.2	87.5	91.4	77.1
1994	115.0	126.1	105.4	91.7	83.6	86.0	77.1
1995	121.8	131.9	103.1	84.6	78.1	-3.6	71.4
Average annual percent change:							
1988-95	3.2	3.5	1.0	-2.1	-2.4	-2.4	-2.6
1990-95	2.5	3.0	-1.2	-3.6	-4.1	-3.8	-4.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical

Reporting Service, U.S. Department of Agriculture; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 29. Beet sugar (SIC 2063): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	80.3	76.4	111.2	138.4	145.5	157.6	84.8
1973	75.9	75.2	105.5	139.0	140.4	151.6	84.8
1974	71.3	68.4	101.2	141.9	148.0	159.2	92.4
1975	74.3	69.6	109.3	147.1	157.0	166.8	107.7
1976	76.7	76.4	125.6	163.6	164.4	172.8	123.2
1977	75.3	74.9	108.0	143.4	144.2	150.0	115.3
1978	73.8	68.5	93.6	126.8	136.6	142.4	107.6
1979	78.3	74.1	90.9	116.0	122.7	122.7	123.2
1980	76.2	69.7	87.2	114.5	125.2	128.8	107.6
1981	73.5	67.4	87.9	119.6	130.4	133.3	115.3
1982	70.4	64.6	84.2	119.6	130.4	133.3	115.3
1983	69.7	69.4	68.5	98.2	98.7	100.0	92.4
1984	79.7	77.3	80.2	100.6	103.8	106.0	92.4
1985	73.4	74.7	74.7	101.8	100.0	100.0	100.0
1986	80.8	82.8	82.8	102.4	100.0	98.5	107.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.6	92.6	95.7	98.1	103.4	104.0	100.0
1989	92.1	89.4	93.5	101.5	104.5	104.0	107.1
1990	97.8	93.8	95.9	98.3	102.2	101.3	107.1
1991	102.3	100.5	108.1	103.7	105.6	105.3	107.1
1992	110.8	112.3	117.3	105.9	104.5	105.7	92.9
1993	108.8	109.1	121.3	110.5	111.2	114.7	92.9
1994	124.2	122.3	126.4	101.8	103.4	105.7	85.7
1995	135.9	135.3	142.9	105.1	105.6	109.3	85.7
Average annual percent change:							
1988-95	3.0	2.8	2.3	-7	-8	-8	-4
1990-95	6.8	7.6	8.3	1.3	.7	1.5	-4.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service, U.S. Department

of Agriculture; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 30. Malt beverages (SIC 2062): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	38.9	38.9	63.2	162.4	162.6	149.3	194.6
1973	43.3	43.4	67.4	155.7	155.1	149.3	168.3
1974	44.8	45.3	71.7	160.1	158.1	153.0	170.4
1975	50.4	50.0	74.3	147.6	148.6	145.0	157.2
1976	55.7	56.6	76.3	136.9	134.7	130.0	146.3
1977	58.2	58.0	80.4	138.3	138.8	137.6	141.9
1978	59.0	59.4	85.5	145.0	143.8	141.9	148.4
1979	63.8	63.6	88.0	138.0	138.5	138.5	138.6
1980	67.1	67.6	92.0	137.1	136.2	135.0	139.6
1981	68.2	68.0	93.6	137.2	137.7	133.3	149.5
1982	70.4	69.7	94.9	134.8	136.1	130.5	149.5
1983	75.0	73.8	94.7	126.3	128.3	126.1	134.1
1984	77.7	75.4	92.2	118.6	122.3	121.4	125.3
1985	73.7	72.8	92.6	125.6	127.2	119.6	146.2
1986	85.0	87.1	93.4	109.8	107.2	109.8	101.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.1	99.3	101.2	102.1	102.0	98.8	107.2
1989	105.2	106.4	105.9	100.6	99.5	96.1	105.2
1990	110.6	111.9	108.4	98.0	96.8	91.8	105.2
1991	109.6	110.1	107.9	98.5	98.0	92.6	107.2
1992	113.4	114.1	111.0	97.9	97.3	92.6	105.2
1993	112.6	111.9	107.8	95.8	96.3	94.2	100.0
1994	117.5	122.4	110.7	94.3	90.5	94.6	83.7
1995	118.0	125.2	109.3	92.6	87.3	92.2	79.1
Average annual percent change:							
1947-95	5.0	4.9	2.6	-2.3	-2.3	-2.1	-2.5
1990-95	1.3	2.3	.2	-1.1	-2.0	.1	-5.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S.

Department of the Treasury, and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 31. Bottled and canned soft drinks (SIC 2086): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	47.0	46.7	50.2	106.9	107.4	122.1	100.2
1973	49.2	49.0	53.3	108.3	106.7	122.9	101.9
1974	50.8	50.5	54.2	106.6	107.3	122.7	100.0
1975	55.7	55.2	57.3	102.8	103.8	117.4	97.2
1976	59.2	58.7	63.9	107.8	108.7	121.4	102.5
1977	62.2	61.7	69.0	110.9	111.8	123.9	106.0
1978	64.2	63.9	73.6	114.7	115.2	125.9	109.9
1979	64.4	64.0	75.5	117.2	117.9	125.5	114.1
1980	66.5	66.2	77.4	116.3	116.8	120.4	114.8
1981	68.8	68.5	78.3	113.8	114.4	115.4	114.2
1982	71.1	70.5	79.4	111.8	112.7	112.2	113.0
1983	75.7	75.1	82.3	108.7	109.6	108.0	110.4
1984	81.6	80.9	87.2	106.9	107.8	107.0	108.1
1985	85.2	84.8	90.6	106.3	105.8	106.2	107.1
1986	91.4	91.0	95.5	104.5	104.3	103.6	105.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	109.8	109.6	104.5	95.1	95.4	96.9	94.6
1989	119.4	119.5	106.7	89.4	89.3	89.9	89.0
1990	126.7	127.4	109.5	86.4	85.9	86.3	85.7
1991	135.1	136.0	111.3	82.4	81.9	84.2	80.7
1992	144.2	144.9	113.0	78.4	78.0	84.5	74.8
1993	144.7	146.0	116.1	80.2	79.5	91.5	73.7
1994	150.4	152.7	121.1	80.6	79.3	94.0	72.2
1995	160.0	161.5	125.5	78.4	77.7	93.3	70.2
Average annual percent change:							
1958-95	4.1	4.2	4.0	-1	-2	-2	-2
1990-95	4.8	4.9	2.8	-1.9	-2.0	1.6	-3.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Sales Survey and Statistical Profile of the Soft

Drink Industry, National Soft Drink Association; the Annual Report of the Beverage Marketing Corporation; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 32. Fresh or frozen prepared fish (SIC 2092): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	100.6	97.5	63.8	63.4	65.4	66.9	57.1
1973	93.3	90.5	61.9	66.3	68.4	68.4	67.9
1974	106.0	101.7	65.8	62.1	64.7	64.1	67.9
1975	104.1	100.0	62.9	60.4	62.9	63.5	58.9
1976	100.7	99.0	64.3	63.8	64.9	65.3	62.5
1977	103.6	97.8	67.8	84.8	89.8	90.8	83.9
1978	110.4	104.5	97.1	88.0	92.9	94.8	82.1
1979	94.1	92.2	87.1	92.6	94.5	95.4	89.3
1980	103.2	97.9	91.3	88.4	93.2	94.2	87.5
1981	96.9	93.8	90.2	93.1	96.2	97.9	85.7
1982	97.3	93.3	91.6	94.2	98.2	99.7	89.3
1983	88.4	86.4	77.6	87.6	89.8	90.5	85.7
1984	89.4	86.2	77.0	86.1	89.3	88.3	94.6
1985	87.8	86.3	81.3	92.6	94.2	93.9	96.4
1986	91.2	89.0	85.3	93.6	95.9	93.9	107.1
1987	103.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	130.0	99.3	104.2	104.2	105.0	103.1	116.1
1989	94.6	97.1	99.1	104.8	102.1	100.9	108.9
1990	88.9	94.3	105.4	118.6	111.8	111.7	112.5
1991	87.4	92.0	103.1	116.0	112.0	112.0	112.5
1992	95.6	103.1	111.5	116.6	108.1	104.9	126.8
1993	100.1	102.9	108.0	107.9	105.0	101.2	126.8
1994	93.2	99.4	103.3	110.9	103.9	100.6	123.2
1995	88.1	98.9	99.4	112.9	100.5	96.0	126.8
Average annual percent change:							
1972-95	-6	1	1.9	2.5	1.9	1.6	3.5
1990-95	-2	1.0	-1.2	-1.0	-2.1	-3.0	2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 33. Tobacco products (SIC 211, 212, 213): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.7	69.9	101.4	149.7	145.1	173.1	68.1
1973	68.7	71.4	108.4	157.7	151.9	180.0	74.0
1974	72.2	73.1	107.3	148.7	146.9	173.4	74.0
1975	76.9	78.1	109.8	142.8	140.6	163.0	79.0
1976	82.6	84.5	116.7	141.3	138.1	159.9	78.0
1977	81.0	80.7	109.5	131.5	131.9	151.2	79.0
1978	84.3	86.4	110.8	131.5	128.3	146.4	77.9
1979	84.5	86.6	112.0	132.5	129.3	145.0	86.0
1980	85.0	87.6	113.6	133.6	129.6	142.9	93.0
1981	84.0	85.7	116.9	139.1	136.4	150.2	99.0
1982	84.3	84.2	110.6	131.2	131.4	140.6	106.0
1983	86.3	85.2	105.1	121.8	123.3	129.1	107.0
1984	89.3	90.0	103.8	116.0	115.2	116.9	111.0
1985	91.2	89.9	101.1	110.9	112.4	115.5	104.0
1986	93.0	93.1	97.7	105.1	105.0	105.2	105.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.2	102.8	132.2	97.1	99.5	101.1	95.0
1989	106.4	104.4	97.5	91.6	93.4	95.0	89.0
1990	109.5	113.5	99.7	91.1	87.8	86.0	93.0
1991	110.0	108.5	93.6	85.1	86.2	85.3	89.0
1992	111.6	111.7	92.2	82.6	82.5	79.9	90.0
1993	98.0	96.0	77.5	78.3	80.7	78.8	86.0
1994	126.4	127.0	98.4	76.3	75.9	73.0	84.0
1995	144.2	153.0	103.6	71.9	67.7	65.5	74.0
Average annual percent change:							
1987-95	3.6	3.6	1.0	-2.5	-2.5	-3.0	.4
1990-95	5.7	6.2	.8	-4.6	-5.1	-5.3	-4.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S.

Department of the Treasury; the Bureau of the Census; the Bureau of Labor Statistics; and the Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 34. Cigarettes, chewing and smoking tobacco (SIC 211, 213): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	79.4	82.3	96.5	121.6	117.3	139.4	56.7
1973	79.4	83.1	104.4	131.5	125.7	148.0	65.3
1974	81.5	83.6	104.0	127.5	124.4	144.9	68.4
1975	85.6	87.4	107.5	125.6	123.1	141.4	72.5
1976	90.0	92.6	115.2	126.1	124.4	142.9	73.7
1977	88.1	87.9	105.1	119.3	119.6	135.5	75.8
1978	91.7	94.7	109.7	119.7	115.9	130.7	75.8
1979	90.4	93.3	111.3	123.1	119.3	132.0	84.2
1980	89.7	93.0	113.1	126.1	121.6	132.4	91.6
1981	87.9	89.6	116.6	132.7	130.1	141.8	97.9
1982	87.8	87.4	110.5	126.1	125.4	134.0	105.3
1983	90.0	88.7	104.8	116.4	118.1	122.4	105.3
1984	91.3	92.5	103.2	113.1	111.6	111.9	110.4
1985	93.6	92.4	100.8	107.7	109.1	111.1	103.2
1986	95.4	95.5	97.4	102.1	102.0	101.5	103.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.8	102.5	102.2	97.5	99.7	101.2	95.8
1989	106.7	104.9	97.5	91.4	92.9	95.0	87.4
1990	109.9	114.3	99.7	90.7	87.3	85.7	51.6
1991	111.6	110.6	93.3	83.7	84.4	83.3	87.4
1992	113.4	113.6	92.1	81.2	81.0	78.3	88.4
1993	101.6	96.1	77.2	76.1	78.8	76.7	84.2
1994	130.1	130.4	96.4	74.1	73.9	71.3	81.1
1995	149.2	158.8	103.4	69.3	65.2	62.8	71.6
Average annual percent change:							
1972-95	2.4	2.3	1.2	-1.1	-1.1	-1.6	1.4
1980-95	6.3	6.8	.7	-5.2	-5.7	-6.0	-4.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S.

Department of the Treasury, the Bureau of the Census, the Bureau of Labor Statistics, and the Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 35. Cotton and synthetic broadwoven fabrics (SIC 221, 222): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	64.9	64.6	99.1	152.8	153.4	153.8	149.4
1973	58.1	57.4	89.6	154.3	156.3	156.3	155.1
1974	60.0	57.1	88.5	147.5	154.9	154.7	155.1
1975	66.1	61.6	88.8	134.4	144.2	144.1	145.3
1976	66.1	63.6	99.5	150.5	156.4	156.8	152.1
1977	75.4	72.3	110.7	148.8	153.1	153.2	151.0
1978	70.5	68.4	99.9	141.8	146.1	145.9	147.3
1979	75.6	73.7	107.3	141.9	145.5	145.8	143.2
1980	78.4	75.6	107.3	136.9	141.9	141.9	142.3
1981	80.7	77.1	104.4	129.4	135.3	134.6	141.6
1982	85.5	75.5	90.4	105.8	119.7	117.8	136.5
1983	92.8	89.1	103.1	111.1	115.8	114.9	124.0
1984	91.1	86.4	100.6	110.4	116.4	115.8	121.4
1985	94.8	88.6	92.6	97.6	104.5	103.9	109.4
1986	101.1	96.3	95.9	94.9	97.6	97.4	99.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.0	97.4	97.5	97.5	100.1	99.9	101.6
1989	103.9	101.1	96.5	92.9	95.5	95.0	99.5
1990	108.1	102.9	92.2	85.3	89.7	88.8	99.0
1991	113.8	108.4	92.2	81.0	85.1	83.8	95.8
1992	118.4	115.5	95.9	81.0	83.0	81.2	99.0
1993	125.8	122.5	100.2	79.8	81.8	79.1	105.2
1994	134.1	131.8	105.3	78.5	79.8	77.2	102.8
1995	142.8	138.8	110.2	77.2	79.4	76.2	107.3
Average annual percent change:							
1972-95	3.5	3.4	.5	-2.9	-2.8	-3.0	-1.4
1980-95	5.7	6.2	3.6	-2.6	-2.4	-3.0	1.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 36. Hosiery (SIC 2251, 2252): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	60.6	58.2	72.5	119.6	124.6	124.4	125.5
1973	63.2	58.1	70.0	110.7	120.5	120.3	121.5
1974	70.8	64.5	63.4	89.0	98.3	97.8	101.2
1975	81.4	73.2	66.5	81.7	90.9	90.9	91.8
1976	91.3	85.5	73.6	80.6	86.0	86.1	83.7
1977	85.6	81.3	72.6	84.9	89.3	90.4	81.2
1978	87.8	84.0	77.8	88.7	92.7	93.2	87.8
1979	93.3	92.2	87.5	93.8	94.9	94.0	102.8
1980	91.7	90.2	85.6	93.3	94.8	93.2	108.0
1981	104.7	104.1	95.7	91.4	91.9	89.6	109.5
1982	97.8	92.2	88.0	90.0	95.4	95.1	98.6
1983	101.1	98.6	96.4	95.4	97.8	99.0	87.8
1984	102.4	100.2	98.2	95.9	98.0	96.1	113.5
1985	101.9	100.3	95.2	94.3	94.9	94.7	97.2
1986	102.5	102.6	98.4	96.9	96.8	96.3	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	108.1	107.4	106.1	98.1	98.7	99.7	90.7
1989	110.9	110.0	111.7	100.8	101.5	102.5	93.3
1990	109.2	105.8	105.0	95.2	99.3	99.1	101.3
1991	115.7	115.3	111.3	95.2	96.5	96.0	101.3
1992	122.2	120.7	116.8	95.6	96.8	97.0	94.7
1993	117.4	116.8	110.6	94.3	94.7	94.4	97.3
1994	124.8	124.6	116.1	93.0	93.2	91.7	105.3
1995	127.1	124.5	111.8	88.0	89.8	87.7	108.0
Average annual percent change:							
1947-95	4.4	4.4	2.6	-1.7	-1.7	-1.9	-1
1980-95	3.1	3.3	1.3	-1.8	-2.0	-2.4	1.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census, the Bureau of Labor

Statistics, and the National Association of Hosiery Manufacturers, Inc. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 37. Yarn spinning mills (SIC 2281): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	59.5	60.4	62.8	105.5	104.0	106.2	81.0
1973	55.9	55.5	61.6	110.2	111.0	113.3	86.3
1974	58.6	54.3	59.4	101.4	109.4	110.5	87.0
1975	67.4	60.9	57.7	85.6	94.7	95.4	87.6
1976	62.1	59.6	62.8	101.1	105.5	107.1	87.6
1977	66.3	64.7	68.8	105.4	107.9	109.0	98.2
1978	66.3	67.1	72.7	104.9	108.3	109.5	96.9
1979	66.3	66.3	68.6	100.5	103.5	104.6	91.5
1980	65.5	62.1	64.1	98.0	103.3	103.6	99.6
1981	67.8	63.4	63.0	92.9	99.3	99.7	96.9
1982	78.6	70.8	59.7	75.9	84.3	84.5	82.3
1983	85.2	82.7	70.0	82.2	84.7	85.1	81.1
1984	86.2	81.3	71.3	82.7	87.7	87.8	86.1
1985	89.6	83.6	67.9	75.8	81.2	81.2	79.8
1986	93.2	93.6	77.1	82.7	82.3	82.7	78.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.5	93.5	93.5	95.0	100.0	100.3	97.6
1989	103.3	97.4	95.2	92.2	97.8	97.6	100.0
1990	106.0	98.2	92.3	87.1	94.1	93.3	101.2
1991	106.5	98.8	90.4	85.7	91.5	90.6	100.0
1992	114.1	108.8	99.1	85.9	90.3	89.8	95.2
1993	120.0	114.9	101.7	84.7	88.5	88.3	90.4
1994	125.5	121.5	105.8	84.3	87.1	86.9	89.2
1995	133.2	126.1	108.7	80.2	84.7	84.0	90.4
Average annual percent change:							
1958-95	3.7	3.9	4.1	.4	.2	.1	1.5
1980-95	4.7	5.1	2.9	-1.8	-2.1	-2.1	-2.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 38. Men's and boys' suits and coats (SIC 231): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	79.3	80.4	157.5	198.6	195.9	200.5	170.0
1973	75.6	76.0	151.5	200.5	199.5	203.5	176.3
1974	80.1	77.0	142.2	177.1	184.7	187.1	171.3
1975	95.5	90.5	138.0	144.0	152.6	154.1	144.3
1976	89.6	89.8	140.3	156.6	156.2	160.0	134.5
1977	94.3	94.5	149.5	158.6	158.2	161.6	139.3
1978	90.6	90.9	141.0	155.7	155.2	159.2	133.3
1979	95.9	94.7	133.5	139.2	141.0	141.9	136.7
1980	90.3	90.8	121.7	134.8	134.0	136.6	120.9
1981	91.4	91.9	121.8	133.3	132.5	135.3	115.7
1982	88.6	86.2	112.1	126.5	130.1	132.5	115.7
1983	90.1	89.4	108.7	120.6	121.6	124.0	107.2
1984	93.2	94.2	114.7	123.1	121.8	124.4	106.0
1985	106.3	103.6	113.3	106.6	109.3	111.3	97.6
1986	103.5	101.7	104.6	101.0	102.8	103.2	100.0
1987	103.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.4	104.6	104.2	101.7	99.7	100.6	94.0
1989	101.9	102.2	96.7	94.9	94.6	94.4	96.4
1990	98.7	98.1	84.7	85.8	86.4	84.7	96.4
1991	91.4	92.9	76.2	83.5	82.0	80.2	92.8
1992	102.4	102.8	79.0	77.1	76.5	75.0	88.0
1993	109.0	110.0	79.8	73.2	72.5	70.2	86.7
1994	129.1	129.9	88.8	68.8	68.4	66.3	80.7
1995	121.5	122.4	77.0	63.3	62.9	59.9	80.7
Average annual percent change:							
1972-95	2.4	2.2	-2.3	-4.5	4.4	-4.7	-2.9
1980-95	4.2	4.5	-1.9	-5.9	-6.2	-6.7	-3.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 39. Housefurnishings, except curtains and draperies (SIC 2392): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	82.5	80.2	72.7	88.2	90.7	89.3	98.7
1973	87.2	83.1	76.7	88.0	92.3	90.2	103.8
1974	77.7	72.3	63.3	81.5	87.5	84.1	106.4
1975	79.7	76.8	62.1	78.0	80.9	77.7	98.7
1976	77.6	75.6	67.0	86.4	88.6	85.7	105.1
1977	82.7	80.7	75.1	90.8	93.1	89.8	111.5
1978	77.9	76.4	76.8	98.6	100.6	98.6	111.5
1979	76.0	74.7	76.1	100.2	101.9	99.3	116.7
1980	74.5	72.4	70.0	94.0	96.7	93.6	114.1
1981	76.6	75.6	71.5	93.3	94.6	91.6	111.5
1982	82.6	79.7	72.5	87.8	90.9	88.0	103.8
1983	81.7	81.7	79.2	96.9	96.9	95.9	102.6
1984	83.6	82.3	83.1	96.4	101.0	101.4	98.7
1985	92.4	90.4	87.1	94.2	95.3	96.8	93.6
1986	93.6	92.4	88.7	94.7	95.9	95.9	96.2
1987	100.0	100.0	100.0	100.0	100.0	103.0	100.0
1988	99.8	98.7	100.3	100.4	101.5	101.4	102.6
1989	96.8	97.2	102.4	105.8	105.4	104.5	110.3
*							
1990	101.3	100.1	105.0	103.7	104.8	102.7	116.7
1991	110.9	107.5	107.6	97.0	99.8	97.7	111.5
1992	117.9	115.4	114.9	97.4	99.6	98.9	103.8
1993	118.7	117.2	118.2	100.4	101.7	102.0	100.0
1994	114.1	112.4	123.7	108.4	110.0	110.5	107.7
1995	115.4	113.2	123.9	107.3	109.5	109.5	109.0
Average annual percent change:							
1972-95	1.5	1.5	2.3	.9	.8	.9	.4
1980-95	2.6	2.5	3.4	.7	.9	1.3	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 40. Sawmills and planing mills, general (SIC 2421): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	74.3	71.5	80.4	108.2	112.4	115.9	88.9
1973	68.3	65.8	77.0	112.8	117.1	120.7	93.7
1974	65.4	61.6	72.1	110.2	117.0	119.2	102.2
1975	68.2	64.3	69.3	101.5	107.7	110.2	90.6
1976	70.5	67.3	76.8	104.8	114.1	116.8	95.9
1977	69.8	67.3	79.5	113.9	118.1	120.7	101.0
1978	71.7	68.0	79.4	110.7	116.7	118.7	103.7
1979	73.3	68.8	82.1	112.0	119.2	121.2	106.3
1980	71.5	67.0	79.2	110.7	118.1	117.6	122.9
1981	73.9	69.0	74.9	101.4	108.6	108.1	111.9
1982	81.4	73.9	85.7	80.8	89.0	88.3	93.7
1983	86.7	81.1	78.2	90.1	96.4	95.7	92.7
1984	89.7	83.8	80.7	90.0	96.3	97.1	90.6
1985	93.5	88.7	81.5	87.2	91.9	92.9	85.4
1986	102.3	97.5	92.8	90.7	95.2	95.9	90.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.2	100.7	102.0	100.6	101.3	100.9	104.2
1989	100.1	99.0	98.7	98.6	99.7	98.7	107.3
1990	99.9	98.8	96.7	96.7	97.8	96.3	108.9
1991	102.9	101.5	91.8	89.2	90.4	88.3	106.3
1992	108.9	108.8	96.1	88.3	88.3	86.4	102.6
1993	101.5	102.3	90.7	89.4	88.7	87.0	101.6
1994	103.2	105.4	98.8	93.8	91.8	90.0	105.8
1995	110.3	110.2	99.6	91	90.4	88.4	105.8
Average annual percent change:							
1958-95	2.7	3.0	1.3	-1.4	-1.6	-1.7	-1.0
1980-95	2.0	2.2	.6	-1.4	-1.6	-1.7	-8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census, the Bureau of Labor

Statistics, and the American Forest and Paper Association. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 41. Hardwood dimension and flooring mills (SIC 2426): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	83.3	82.5	89.3	107.1	108.2	110.0	95.1
1973	84.0	81.9	87.0	103.6	106.2	107.4	97.6
1974	79.1	75.8	72.5	91.6	95.6	97.7	80.5
1975	100.1	95.1	72.2	72.1	75.9	75.6	78.0
1976	90.2	88.3	78.9	87.5	89.4	90.3	82.9
1977	89.9	87.4	82.0	91.2	93.8	94.6	87.8
1978	91.8	89.8	89.0	97.0	99.1	99.7	95.1
1979	83.0	80.7	81.4	98.1	100.9	100.3	114.9
1980	83.7	78.9	71.5	85.4	90.6	89.3	100.0
1981	86.1	82.4	71.5	83.1	86.8	85.3	97.6
1982	94.3	87.8	65.8	69.8	75.0	73.2	87.8
1983	88.2	85.7	71.3	80.8	83.2	82.6	87.8
1984	85.6	83.2	78.0	91.2	93.8	93.3	97.6
1985	95.1	92.0	85.1	89.4	92.4	92.0	95.1
1986	98.8	97.8	92.3	93.4	94.4	94.0	97.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.5	95.2	98.6	101.1	103.5	103.7	102.4
1989	96.9	94.0	99.0	102.2	105.3	105.0	107.3
1990	95.7	92.2	94.4	98.6	102.4	102.3	102.4
1991	98.6	94.4	90.5	91.8	95.9	95.3	100.0
1992	105.4	103.2	101.0	95.9	97.9	97.7	100.0
1993	111.2	110.2	112.8	101.5	102.4	101.7	107.3
1994	111.0	109.3	118.0	106.3	107.9	107.4	112.2
1995	117.1	112.4	122.3	104.4	108.8	108.0	114.8
Average annual percent change:							
1972-95	1.5	1.4	1.4	-1	0	-1	8
1980-95	4.1	4.0	5.3	1.1	1.2	1.1	2.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 42. Millwork (SIC 2431): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	108.8	105.4	75.5	69.4	71.6	73.4	63.4
1973	104.2	100.5	76.6	73.5	76.2	77.5	70.2
1974	92.2	98.2	60.5	65.6	68.6	68.6	68.0
1975	98.8	98.1	59.6	60.3	62.0	61.5	63.4
1976	98.8	95.5	66.2	67.0	69.3	70.1	64.8
1977	104.8	101.7	75.2	71.8	74.0	75.2	68.0
1978	94.5	91.3	71.2	75.4	78.0	79.5	71.2
1979	95.4	91.4	70.3	73.7	78.9	77.4	74.4
1980	97.8	93.3	64.4	66.0	69.1	68.0	73.3
1981	96.7	95.0	64.2	64.4	67.6	66.8	70.7
1982	95.5	91.7	54.0	56.6	58.9	57.2	65.7
1983	99.1	98.2	66.8	67.4	68.0	68.0	68.1
1984	100.4	98.6	75.0	74.7	76.1	76.9	72.8
1985	97.4	96.6	77.3	75.4	80.0	80.6	77.5
1986	102.2	101.8	86.7	84.8	85.1	85.7	82.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.2	95.5	97.8	99.6	102.5	101.6	106.1
1989	97.8	94.7	95.2	97.4	100.6	99.3	105.6
1990	97.8	94.7	92.7	94.7	97.8	95.1	108.9
1991	95.7	93.1	93.7	97.4	89.8	86.1	105.2
1992	93.4	91.8	84.5	90.4	92.0	89.2	103.8
1993	92.5	90.9	86.1	93.1	94.8	92.0	106.1
1994	98.5	87.6	88.8	100.1	101.1	98.6	111.3
1995	96.0	84.5	85.7	99.7	101.5	98.1	115.5
Average annual percent change:							
1958-95	.0	.0	1.6	1.6	1.6	1.5	2.0
1990-95	-2.5	-2.3	-1.6	1.0	.7	.6	1.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 43. Wood kitchen cabinets (SIC 2434): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	79.2	76.8	41.3	52.2	53.8	63.5	23.4
1973	80.5	76.8	45.5	56.5	59.2	69.3	26.7
1974	75.0	70.9	38.6	51.4	54.4	62.4	27.1
1975	82.3	76.4	34.1	41.4	44.8	50.6	23.0
1976	77.5	72.7	36.0	49.0	52.2	61.5	22.7
1977	97.1	91.2	57.0	58.7	62.5	74.1	26.3
1978	95.1	91.4	64.7	68.1	70.8	83.7	30.1
1979	89.0	84.0	64.3	72.2	76.5	91.3	31.2
1980	94.1	87.6	59.9	63.7	68.4	79.6	31.9
1981	90.8	85.0	56.5	62.2	66.4	75.4	34.5
1982	92.5	86.4	51.2	55.4	59.3	65.4	34.5
1983	91.7	90.4	62.2	67.8	68.8	68.2	71.2
1984	91.6	91.9	73.9	80.7	80.5	81.9	74.8
1985	87.1	85.7	73.1	83.9	85.3	86.8	79.1
1986	85.2	84.2	77.8	91.3	92.4	93.0	89.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.7	95.3	97.9	102.2	102.7	102.1	105.0
1989	91.1	89.1	92.6	101.7	104.0	103.2	107.2
1990	93.6	91.5	93.5	99.9	102.1	101.1	106.5
1991	90.3	89.0	82.1	88.9	91.2	89.5	88.6
1992	102.0	102.0	94.7	92.8	92.8	90.9	100.7
1993	101.9	102.3	99.4	97.8	97.2	96.1	101.4
1994	101.3	102.7	108.4	107.0	105.5	105.4	105.8
1995	100.8	101.7	108.2	108.3	107.3	106.9	109.4
Average annual percent change:							
1972-95	1.1	1.2	4.3	3.1	3.0	2.3	6.9
1990-95	1.9	2.1	3.2	1.2	1.0	1.1	5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 44. Veneer and plywood (SIC 2435, 2436): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	72.4	74.8	91.8	126.7	123.0	122.6	127.3
1973	69.9	69.0	68.1	127.9	121.7	125.9	143.6
1974	68.1	66.2	77.2	113.4	116.7	114.4	136.9
1975	75.7	72.8	74.1	97.8	101.8	99.1	127.3
1976	75.7	74.9	85.0	112.3	113.5	112.1	125.7
1977	74.8	74.3	85.8	118.7	119.5	118.4	130.6
1978	75.8	75.0	93.9	123.8	125.1	123.3	141.9
1979	69.3	67.3	84.2	121.6	125.1	121.9	154.9
1980	74.2	70.4	75.4	101.7	107.1	103.5	138.7
1981	77.1	72.9	76.0	96.6	104.2	102.6	119.4
1982	83.3	77.4	71.0	85.2	91.7	89.3	112.9
1983	87.8	86.1	84.0	95.7	97.6	96.5	108.0
1984	85.9	84.1	85.0	148.9	101.1	100.9	103.2
1985	87.7	86.4	83.1	94.8	96.2	96.8	91.9
1986	89.2	88.9	87.3	97.8	98.1	98.6	93.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.7	99.5	99.2	99.5	99.7	98.7	108.1
1989	100.0	100.5	95.7	95.7	95.3	93.8	108.1
1990	101.4	101.2	92.3	91.0	91.2	89.5	106.5
1991	104.3	103.5	84.1	80.6	81.2	79.5	96.8
1992	103.3	104.7	85.5	82.8	81.7	79.8	96.4
1993	99.3	99.5	84.5	85.1	85.0	83.3	100.0
1994	93.0	95.3	85.3	91.8	89.5	87.5	108.1
1995	90.0	91.9	85.0	95.6	93.6	91.1	116.1
Average annual percent change:							
1958-95	2.9	3.0	2.9	-1	-2	-3	1.8
1990-95	-2.4	-1.8	-1.4	1.0	5	4	1.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 45. Hardwood veneer and plywood (SIC 2435): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	93.8	95.8	124.3	132.6	129.8	132.6	110.3
1973	80.2	80.7	106.8	133.2	132.3	116.0	106.8
1974	79.5	78.1	92.4	116.3	118.4	122.0	93.1
1975	83.5	80.0	76.3	91.4	95.3	96.7	86.1
1976	77.8	77.0	79.9	102.6	103.7	105.3	93.1
1977	82.0	81.2	89.7	109.3	110.4	111.5	103.4
1978	82.3	80.6	83.1	113.1	115.5	117.8	100.0
1979	79.6	77.6	80.9	114.3	117.2	118.7	106.8
1980	83.7	80.0	83.3	99.5	104.1	104.8	100.0
1981	81.5	80.0	83.6	102.6	104.6	104.5	106.8
1982	86.1	79.9	73.5	85.4	92.0	90.9	100.0
1983	82.4	80.2	86.7	93.9	96.2	95.7	100.0
1984	83.9	82.0	83.7	99.7	102.1	102.5	100.0
1985	84.5	82.6	77.7	91.9	94.1	94.3	93.1
1986	83.2	82.2	79.4	95.4	96.6	97.1	93.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.0	98.3	100.0	101.0	101.7	101.0	106.9
1989	98.9	98.0	100.1	101.2	102.1	100.5	113.8
1990	92.2	91.2	91.2	98.9	100.0	98.1	113.8
1991	93.3	92.2	85.3	91.4	92.4	90.4	106.9
1992	104.1	104.7	98.3	94.4	94.1	91.4	113.8
1993	108.1	107.2	105.3	99.3	99.2	98.7	117.2
1994	90.5	82.0	88.9	109.3	107.6	105.7	120.7
1995	84.2	84.7	98.7	118.3	117.6	115.3	134.5
Average annual percent change:							
1972-95	-1.5	-1.5	-1.0	-1.5	-1.4	-1.6	0.8
1990-95	-1.8	-1.8	-1.8	1.8	3.6	3.3	3.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 46. Softwood veneer and plywood (SIC 2436): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	69.0	71.4	84.7	120.8	118.7	118.3	142.5
1973	67.7	67.5	84.1	124.3	124.7	119.7	175.8
1974	66.1	63.9	73.7	111.5	115.4	109.6	175.8
1975	72.5	69.7	73.8	101.8	106.0	100.5	163.6
1976	73.0	72.3	86.4	118.3	119.5	116.1	154.5
1977	71.0	70.6	88.5	124.7	125.4	122.5	154.5
1978	72.1	71.5	94.0	130.4	131.4	126.7	178.9
1979	65.6	63.4	82.6	125.9	130.3	123.7	197.0
1980	71.3	67.5	73.5	103.1	108.9	102.6	172.8
1981	77.0	71.3	74.1	98.3	103.9	101.4	130.3
1982	82.9	77.1	70.5	95.0	91.4	88.3	124.2
1983	86.3	84.8	83.6	96.8	98.6	97.1	115.3
1984	87.1	85.2	85.6	98.3	100.5	100.0	106.1
1985	88.3	87.2	85.0	98.3	97.5	98.1	90.9
1986	90.4	90.9	89.9	99.4	98.9	99.4	93.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.6	100.8	99.2	98.6	98.4	97.4	109.1
1989	102.6	104.1	94.7	97.2	90.9	89.7	103.0
1990	108.3	108.9	93.2	86.1	85.6	84.2	100.0
1991	114.3	113.9	84.4	73.9	74.1	72.7	87.9
1992	109.2	111.7	82.5	75.5	73.8	72.7	84.8
1993	103.4	103.8	78.8	76.2	75.9	75.1	84.8
1994	101.4	105.0	82.0	80.8	78.1	76.2	97.0
1995	101.5	105.5	82.7	81.4	78.3	76.2	100.0
Average annual percent change:							
1977-95	1.7	1.7	-1	-1.8	-1.8	-1.8	-1.5
1980-95	-1.3	-1.6	-2.4	-1.1	-1.8	-2.0	0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 47. Wood containers (SIC 244): Indexes of output per hour and related measures, 1977-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1977	81.3	80.7	80.9	98.5	100.2	104.4	76.6
1978	81.7	80.7	85.6	104.7	106.0	110.1	82.8
1979	72.9	72.2	80.7	110.8	111.8	118.3	87.5
1980	86.2	83.9	85.0	98.6	101.3	103.6	89.1
1981	84.4	84.1	82.6	97.9	98.3	99.2	93.8
1982	100.5	98.6	88.5	98.0	99.7	99.0	93.8
1983	100.0	100.2	90.4	98.4	98.2	89.6	93.8
1984	103.4	103.1	100.9	97.6	97.9	98.0	96.9
1985	99.8	98.9	98.6	97.0	97.6	97.7	96.9
1986	98.7	98.2	95.6	98.9	97.4	97.5	96.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.2	103.7	108.4	105.0	104.5	104.8	103.1
1989	108.0	109.2	118.5	107.2	106.7	106.5	107.8
1990	111.6	113.8	122.5	109.8	107.8	107.0	110.9
1991	113.5	115.2	121.0	106.6	106.0	103.9	110.9
1992	109.8	111.2	115.5	106.2	103.8	102.8	109.4
1993	100.5	100.1	111.8	101.2	108.5	109.8	109.4
1994	101.0	103.5	121.8	120.5	117.7	118.0	115.6
1995	107.1	107.7	129.8	121.3	120.5	121.1	117.2
Average annual percent change:							
1977-95	1.5	1.6	2.7	1.1	1.0	.8	2.4
1980-95	-1.8	-1.1	1.2	2.0	2.3	2.5	1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Table 48. Mobile homes (SIC 2451): Indexes of output per hour and related measures, 1977-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1977	90.0	90.7	113.1	125.6	124.6	126.6	116.1
1978	94.9	93.4	122.3	128.9	131.0	130.4	95.4
1979	97.2	95.7	120.9	124.4	126.4	129.1	114.1
1980	98.6	94.4	95.9	97.2	101.5	97.3	118.5
1981	104.8	100.9	103.8	99.0	102.9	96.7	128.7
1982	98.6	96.1	91.5	92.7	95.2	89.9	117.2
1983	106.8	106.9	120.9	113.1	111.0	109.5	117.2
1984	94.4	93.5	108.5	114.9	116.0	115.5	118.4
1985	94.3	93.9	105.8	112.3	112.7	112.2	114.9
1986	94.4	94.8	99.6	105.5	105.1	103.8	110.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.6	101.2	98.3	97.7	97.1	97.3	96.6
1989	98.8	97.7	91.9	93.1	94.1	94.6	90.0
1990	101.2	101.2	90.5	89.5	89.5	89.1	90.8
1991	102.5	100.6	82.7	80.7	82.2	81.5	85.1
1992	102.4	105.4	94.1	91.8	89.2	80.5	83.9
1993	103.8	109.0	115.0	110.8	105.5	108.2	94.3
1994	97.6	104.3	127.4	130.5	122.2	126.6	103.4
1995	99.7	103.9	139.3	139.7	134.1	139.4	111.5
Average annual percent change:							
1977-95	5	8	12	6	4	5	-1
1980-95	-3	5	9.0	9.3	8.4	9.4	4.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 49. Household furniture (SIC 251): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	78.9	79.5	87.8	111.3	110.4	111.4	105.1
1973	80.6	80.6	93.0	115.4	115.3	116.4	108.5
1974	79.9	77.9	85.2	106.7	109.4	109.5	109.1
1975	82.1	78.2	72.7	89.6	93.0	82.3	97.0
1976	84.3	82.0	82.2	97.5	100.2	100.7	97.2
1977	88.8	86.7	89.6	100.9	103.3	104.1	98.9
1978	90.0	88.6	96.4	107.2	108.8	109.5	104.7
1979	89.1	86.9	93.8	105.2	107.9	107.9	106.1
1980	93.2	89.1	88.0	94.4	98.8	98.0	103.4
1981	94.1	90.5	88.3	93.9	97.6	86.5	103.4
1982	94.8	88.2	77.8	82.1	88.2	86.0	100.2
1983	94.5	93.1	85.3	90.2	91.6	89.8	101.1
1984	94.5	93.3	90.4	95.7	97.0	96.0	101.9
1985	93.5	91.7	88.5	94.7	96.5	95.6	101.7
1986	98.2	97.1	93.7	95.4	96.5	95.9	99.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.3	98.1	98.9	99.8	100.9	100.9	100.6
1989	101.9	100.3	99.8	97.8	99.2	99.1	100.0
1990	104.3	101.6	96.4	92.4	94.8	93.8	101.3
1991	106.8	103.5	91.9	86.0	88.8	87.2	97.9
1992	110.2	108.4	96.5	87.5	89.0	87.7	96.6
1993	110.3	109.8	99.9	90.8	91.2	90.1	97.0
1994	112.2	111.7	104.2	92.9	93.3	92.4	98.3
1995	117.0	114.5	105.5	90.2	92.2	91.0	98.5
Average annual percent change:							
1980-95	19	1.8	2.3	.4	4	.3	.8
1980-95	23	2.4	1.8	-5	-8	-6	-6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 50. Wood household furniture (SIC 2511, 2517): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	86.5	88.7	94.8	109.6	106.8	108.6	94.3
1973	88.5	89.5	99.6	112.6	111.3	113.1	98.8
1974	86.2	85.6	93.6	108.5	109.3	110.6	100.3
1975	87.3	82.8	76.4	87.5	92.3	93.3	85.6
1976	92.8	91.7	91.0	98.0	99.2	100.9	87.5
1977	93.3	91.8	94.3	101.1	102.8	104.1	94.1
1978	96.7	95.4	103.6	107.2	108.6	110.2	97.5
1979	89.6	87.6	94.0	104.9	107.3	107.8	104.5
1980	91.6	87.5	85.6	93.2	97.8	97.2	102.0
1981	91.5	87.9	84.9	92.8	96.5	95.8	101.2
1982	94.2	86.1	75.9	80.6	88.2	86.6	98.8
1983	93.7	91.4	82.9	88.5	90.7	89.6	98.2
1984	96.9	95.5	92.2	95.2	96.6	96.1	100.1
1985	95.0	92.5	89.2	93.9	96.5	96.1	99.3
1986	99.6	98.2	94.2	94.5	95.9	95.5	98.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.8	99.5	99.2	98.4	99.7	99.6	100.9
1989	101.2	99.8	96.5	95.4	96.7	96.6	97.8
1990	102.5	99.8	91.4	89.2	91.6	90.0	102.9
1991	101.3	97.7	84.5	83.5	86.5	84.7	99.2
1992	106.5	104.0	91.7	86.1	88.2	86.4	100.5
1993	106.2	104.9	93.9	88.4	89.5	88.1	99.5
1994	105.7	104.9	96.7	91.5	92.1	90.1	106.3
1995	109.1	106.0	97.0	88.9	91.5	89.1	108.1
Average annual percent change:							
1958-95	1.7	1.6	2.1	.4	.5	.3	1.5
1990-95	1.3	1.2	1.2	-1	.0	-2	1.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 51. Upholstered household furniture (SIC 2512): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	77.3	76.8	79.7	103.1	103.7	104.1	101.2
1973	75.1	75.4	82.2	109.5	109.1	109.5	106.8
1974	79.1	76.2	75.7	95.8	99.4	98.4	104.3
1975	79.6	76.7	86.7	83.8	87.0	84.9	97.5
1976	77.8	74.7	72.0	92.5	96.3	95.9	98.8
1977	86.6	83.8	82.1	94.8	98.0	98.3	96.3
1978	89.3	88.2	91.5	102.4	103.8	103.0	107.5
1979	92.3	90.2	93.3	101.0	103.5	102.4	108.7
1980	96.8	92.5	86.9	89.7	93.9	92.7	100.0
1981	97.3	93.4	85.0	87.3	90.9	88.9	101.2
1982	94.7	88.2	73.8	77.9	83.6	80.4	100.0
1983	94.8	93.8	82.3	86.8	87.7	84.9	101.9
1984	96.2	95.2	88.7	92.2	93.2	91.4	102.5
1985	96.3	95.1	88.6	92.0	93.2	91.4	102.5
1986	101.7	100.7	95.5	93.9	94.9	94.0	99.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.8	96.8	98.0	99.2	101.4	101.7	100.0
1989	101.2	99.0	99.7	98.5	100.7	100.7	100.6
1990	107.7	103.6	100.7	93.5	97.3	97.0	98.8
1991	115.1	110.0	98.7	85.7	89.7	88.7	95.0
1992	120.0	117.2	104.3	88.9	89.0	88.3	92.5
1993	120.0	119.2	110.4	92.0	92.6	92.5	93.2
1994	130.6	129.4	120.6	92.4	93.2	93.8	90.1
1995	138.7	136.0	124.5	89.8	91.6	92.1	88.8
Average annual percent change:							
1958-95	2.0	2.0	3.1	1.1	1.1	1.0	1.3
1990-95	5.2	5.6	4.3	-8	-12	-10	-2.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 52. Metal household furniture (SIC 2514): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	64.7	62.0	63.2	128.6	134.3	133.8	136.7
1973	68.7	65.2	91.1	132.6	139.6	140.3	136.7
1974	66.6	61.8	80.7	121.2	130.6	129.2	135.7
1975	73.2	67.8	67.3	91.9	99.2	95.4	116.3
1976	74.8	70.2	75.8	101.3	107.9	106.9	112.2
1977	78.4	73.9	85.8	109.5	116.2	114.8	122.4
1978	74.9	70.5	86.4	115.3	122.6	121.3	128.6
1979	71.7	67.3	81.8	114.0	121.5	119.9	128.6
1980	72.5	67.6	75.8	104.5	112.1	110.6	118.4
1981	71.8	68.1	78.3	109.1	115.1	114.8	116.3
1982	83.9	79.7	77.0	91.8	96.6	94.0	104.2
1983	84.1	82.7	82.7	98.4	100.0	98.6	106.1
1984	84.9	82.5	87.5	103.1	106.0	105.1	110.2
1985	89.4	86.3	87.3	97.7	101.1	100.0	106.1
1986	95.3	92.8	91.4	95.9	98.5	98.1	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.2	98.6	101.2	101.0	102.6	102.3	104.1
1989	100.7	97.9	96.0	95.4	98.1	96.8	104.1
1990	101.4	99.7	91.1	89.8	91.3	89.4	100.0
1991	107.2	105.0	86.4	80.6	82.3	80.1	91.8
1992	109.5	108.2	86.1	78.6	79.6	78.2	85.7
1993	106.8	106.5	86.4	80.9	81.1	80.6	83.7
1994	96.1	96.1	83.1	86.4	86.4	87.0	83.7
1995	95.1	93.0	76.9	80.8	82.6	82.4	83.7
Average annual percent change:							
1988-95	1.9	2.0	1.0	.9	-1.0	-9	-1.2
1980-95	-1.3	-1.4	-3.3	-2.1	-2.0	-1.6	-3.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 53. Mattresses and bedsprings (SIC 2515): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	62.4	62.7	87.7	140.4	139.8	144.2	126.1
1973	68.0	67.6	97.6	143.6	144.4	148.8	130.4
1974	67.7	64.6	85.6	126.4	132.4	132.6	131.9
1975	70.0	67.7	77.9	111.3	115.1	114.9	115.9
1976	73.7	71.1	83.6	113.4	117.6	119.5	111.6
1977	80.8	79.9	90.5	112.0	113.4	116.3	104.3
1978	79.3	79.3	90.5	114.1	114.1	118.1	101.4
1979	91.5	89.7	101.6	111.1	113.4	115.3	107.2
1980	99.2	96.6	103.8	104.6	107.4	108.4	104.3
1981	105.5	101.5	108.7	103.0	107.0	108.4	102.9
1982	95.2	91.2	89.6	94.1	98.2	97.2	101.4
1983	93.3	93.5	95.1	102.0	101.8	101.4	102.9
1984	84.1	83.3	87.1	103.5	104.6	106.0	100.0
1985	79.5	79.2	82.6	103.8	104.2	104.7	102.9
1986	85.5	85.7	87.2	102.0	101.8	102.3	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	92.5	93.6	97.5	105.5	104.2	106.0	98.6
1989	106.5	107.7	110.8	104.0	102.8	104.2	98.5
1990	106.2	107.1	107.8	101.5	100.7	101.4	98.6
1991	108.9	113.2	107.5	98.7	97.5	98.6	94.2
1992	103.4	106.5	104.6	101.1	98.2	98.6	97.1
1993	104.4	106.1	108.3	103.7	102.1	102.8	100.0
1994	105.5	107.0	114.2	108.2	105.7	107.9	102.9
1995	110.3	110.4	120.2	108.4	108.8	110.2	104.3
Average annual percent change:							
1988-95	2.6	2.5	2.1	.5	-.4	-.5	-.1
1980-95	.9	.6	.2	1.3	1.6	1.7	1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 54. Office furniture (SIC 252): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	76.2	78.8	38.4	50.4	48.7	51.3	43.4
1973	76.4	78.6	41.3	54.1	52.6	55.0	45.9
1974	69.2	70.0	38.7	55.9	55.2	58.9	43.9
1975	71.3	69.9	31.9	44.7	45.6	46.7	42.4
1976	74.7	74.1	35.3	47.3	47.7	49.2	43.4
1977	82.5	82.8	46.2	56.0	55.8	58.3	48.3
1978	82.5	83.1	49.9	60.5	60.1	63.2	51.2
1979	87.3	89.1	55.2	63.2	61.9	64.8	53.2
1980	92.3	90.6	59.8	64.8	66.0	66.3	65.4
1981	89.5	90.6	60.6	67.7	66.9	67.6	64.8
1982	89.1	88.5	64.5	72.4	72.9	72.9	72.7
1983	94.1	92.6	68.8	73.1	74.3	74.8	72.7
1984	98.4	100.3	81.1	82.4	80.8	81.4	79.0
1985	99.3	100.3	84.9	85.5	84.7	83.6	87.8
1986	101.0	100.8	85.6	84.7	84.9	84.1	87.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.4	98.4	95.9	99.5	99.5	100.8	95.6
1989	97.7	99.5	98.6	100.9	99.0	99.0	99.0
1990	96.8	99.5	91.4	94.4	91.8	91.0	94.1
1991	97.2	99.6	80.5	82.8	80.8	78.1	88.8
1992	99.4	106.7	89.8	90.3	84.1	83.7	85.4
1993	99.5	106.1	91.4	91.9	86.1	86.7	84.4
1994	99.4	106.8	92.1	92.6	86.2	88.5	79.5
1995	101.1	106.4	91.7	90.7	86.1	89.2	77.1
Average annual percent change:							
1958-95	1.7	1.8	4.9	3.1	3.0	2.9	3.5
1990-95	.9	1.3	.1	-1.8	-1.3	-1.4	-3.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 55. Wood office furniture (SIC 2521): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	88.8	90.5	33.6	37.8	37.1	39.3	28.8
1973	82.5	83.0	33.2	40.2	40.0	42.6	30.3
1974	87.6	85.8	37.1	42.3	43.2	46.7	30.3
1975	85.5	78.5	29.3	34.3	37.4	39.7	28.8
1976	87.1	83.3	34.4	39.5	41.3	43.9	31.8
1977	106.7	107.1	55.3	51.8	51.6	52.4	48.5
1978	106.7	105.0	59.2	55.5	56.4	56.1	57.5
1979	117.0	118.0	76.5	65.4	64.8	63.9	68.2
1980	114.7	106.1	69.4	60.5	65.4	63.5	72.7
1981	103.9	104.2	64.9	62.5	62.3	61.0	66.7
1982	93.6	91.6	62.1	66.3	67.8	68.0	66.7
1983	97.3	96.5	64.8	66.6	67.1	68.0	63.7
1984	99.3	99.8	79.8	80.4	80.0	80.3	78.8
1985	99.4	100.0	76.5	76.9	76.5	75.8	78.8
1986	98.2	93.6	74.9	77.8	80.0	81.2	75.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	95.4	93.0	92.1	96.5	99.0	100.4	93.9
1989	95.4	96.2	96.5	101.2	100.3	100.0	101.5
1990	97.4	98.0	98.2	90.6	90.0	89.3	92.4
1991	101.3	102.2	73.2	72.3	71.6	68.4	63.3
1992	107.1	111.2	83.9	78.4	75.5	75.8	74.2
1993	104.4	109.3	81.1	77.7	74.2	75.4	69.7
1994	104.0	108.5	86.1	82.8	79.4	80.7	74.2
1995	103.3	107.3	86.5	83.7	80.6	80.7	80.3
Average annual percent change:							
1958-95	1.0	1.1	5.2	4.1	4.0	3.8	5.2
1990-95	1.2	1.8	.4	-1.6	-2.2	-2.0	-2.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 56. Office furniture, except wood (SIC 2522): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	68.7	71.8	40.2	58.5	56.0	58.0	50.4
1973	70.6	73.1	44.3	62.8	60.6	63.5	53.2
1974	60.8	62.7	39.3	64.6	62.6	67.4	50.4
1975	63.9	64.7	32.8	51.3	50.7	51.4	47.9
1976	68.3	69.0	35.7	52.2	51.7	52.9	48.9
1977	73.1	73.7	42.9	58.7	58.3	62.3	48.2
1978	73.2	74.6	46.6	63.6	62.4	68.0	48.2
1979	76.7	79.1	47.5	61.9	60.0	65.4	46.0
1980	83.5	84.9	56.4	67.5	66.4	68.2	61.9
1981	83.4	84.6	59.1	70.9	69.9	72.1	64.0
1982	85.9	86.1	65.4	76.2	76.0	76.3	75.5
1983	91.2	89.4	70.3	77.1	78.6	79.3	77.0
1984	97.6	100.3	81.6	83.6	81.3	82.2	79.2
1985	96.9	98.2	88.1	90.9	89.7	88.9	92.1
1986	100.6	101.9	89.5	89.0	87.9	86.0	92.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	96.0	97.6	97.4	101.4	99.8	101.1	104.4
1989	98.7	101.2	99.4	100.7	98.2	98.3	107.8
1990	95.6	99.6	92.6	96.8	93.0	92.2	105.0
1991	92.9	96.1	83.1	89.5	86.5	84.6	91.4
1992	93.9	102.7	91.9	98.0	89.5	89.1	90.6
1993	94.3	101.7	95.1	100.9	93.6	94.4	91.4
1994	95.4	104.2	94.4	98.9	90.5	93.9	82.0
1995	98.4	104.5	93.6	95.1	89.5	95.0	75.5
Average annual percent change:							
1987-95	2.0	2.2	4.8	2.7	2.6	2.4	2.9
1990-95	.6	1.0	.2	-4	-8	€	-4.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 57. Pulp, paper, and paperboard mills (SIC 261, 262, 263): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	64.5	66.1	74.1	114.9	112.1	116.5	97.6
1973	67.1	68.5	77.5	115.5	113.0	118.5	96.6
1974	67.1	67.6	77.2	115.0	114.3	118.9	99.4
1975	63.5	62.0	65.5	103.1	105.6	108.2	98.3
1976	69.7	69.2	76.3	109.5	110.3	113.5	99.8
1977	73.3	72.3	79.9	108.9	110.5	113.5	100.9
1978	75.6	74.7	81.7	108.0	109.4	111.4	102.2
1979	77.3	76.3	84.6	109.5	110.9	113.0	104.4
1980	77.1	76.2	84.0	109.0	110.2	111.9	105.0
1981	76.3	75.1	81.7	107.0	108.8	110.7	102.8
1982	81.6	79.0	82.3	100.8	104.1	104.9	101.1
1983	87.2	85.6	88.1	101.0	102.9	104.0	99.8
1984	89.7	88.8	92.8	103.5	104.5	105.1	102.2
1985	87.6	85.7	89.5	102.2	104.4	104.3	104.8
1986	93.3	93.0	93.1	99.8	100.2	100.6	99.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.1	103.3	104.8	101.6	101.5	102.1	99.3
1989	103.2	103.4	105.0	101.8	101.6	102.0	100.2
1990	102.6	103.4	105.5	102.9	102.1	100.9	106.2
1991	102.1	102.7	104.1	101.9	101.4	100.5	104.4
1992	104.7	105.7	107.0	102.2	101.2	101.1	101.8
1993	104.5	106.2	105.1	100.6	99.0	98.8	99.8
1994	112.4	114.4	111.3	99.0	97.3	97.2	97.6
1995	116.2	118.8	114.8	98.5	96.6	96.7	96.2
Average annual percent change:							
1987-95	3.4	3.2	3.2	-2	0	-3	1.3
1990-95	2.5	2.8	1.7	-8	-1.1	-8	-2.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the American Forest and Paper Association. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 58. Corrugated and solid fiber boxes (SIC 2653): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	85.0	85.1	86.4	102.2	102.1	104.7	95.4
1973	70.3	70.1	72.8	103.5	103.8	107.4	94.6
1974	75.1	70.8	89.1	92.0	97.6	99.1	93.7
1975	78.6	74.8	83.3	80.5	84.6	83.3	88.4
1976	82.8	79.8	71.8	86.5	89.8	90.0	89.4
1977	81.6	78.9	75.8	93.0	96.1	95.5	97.8
1978	84.2	81.2	81.4	98.6	100.2	100.3	100.3
1979	87.2	84.3	82.8	95.0	98.2	98.3	98.5
1980	90.5	86.7	79.9	88.2	92.1	90.2	97.2
1981	89.5	87.0	80.1	89.5	92.1	90.5	97.2
1982	91.3	87.3	78.0	85.4	89.3	87.3	94.7
1983	93.0	91.1	83.5	89.8	91.6	89.3	98.2
1984	98.7	95.1	89.0	92.0	93.6	92.8	96.1
1985	96.8	96.9	89.7	90.1	92.6	92.1	94.0
1986	102.8	101.3	95.0	92.4	93.8	93.3	95.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.8	99.8	103.6	103.8	103.8	102.9	106.9
1989	98.1	98.5	106.0	106.1	107.6	106.4	111.5
1990	100.9	100.4	108.4	107.4	107.9	106.5	112.2
1991	100.8	100.9	109.2	108.3	108.2	107.0	112.2
1992	101.9	102.5	114.3	112.1	111.4	110.1	115.6
1993	105.5	107.2	120.5	114.2	112.5	111.8	114.5
1994	110.0	112.7	130.0	118.2	115.4	114.7	117.6
1995	107.6	107.4	128.5	119.4	119.7	118.7	122.9
Average annual percent change:							
1983-95	2.7	2.7	4.3	1.6	1.6	1.5	1.9
1990-95	1.3	1.4	3.5	2.1	2.1	2.2	1.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Fiber Box Association, and the Bureau of the

Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 59. Folding paperboard boxes (SIC 2657): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	82.7	80.3	83.7	101.2	104.2	107.2	93.4
1973	86.4	84.0	86.9	100.5	103.4	106.6	92.2
1974	87.8	85.0	83.7	85.4	88.5	100.4	92.2
1975	86.4	84.1	73.6	85.2	87.5	87.7	86.9
1976	80.6	89.3	82.7	91.3	92.6	93.7	89.0
1977	80.2	87.0	86.8	88.4	102.0	104.2	94.2
1978	94.5	91.4	95.2	100.8	104.2	106.0	97.5
1979	90.7	88.9	91.3	100.7	102.7	105.0	94.2
1980	90.4	87.7	91.2	100.9	104.0	105.7	97.5
1981	90.1	86.3	89.2	99.0	101.1	103.4	93.4
1982	95.0	91.7	90.6	95.4	98.8	99.5	98.3
1983	98.0	95.7	92.3	94.2	98.4	98.7	98.5
1984	93.4	92.4	94.4	101.1	102.2	102.3	101.9
1985	90.0	88.4	87.0	88.7	88.4	89.5	94.5
1986	88.5	88.5	88.5	100.0	100.0	101.3	95.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.8	101.5	104.1	102.4	102.6	102.9	101.0
1989	105.4	104.6	105.0	99.6	100.4	99.8	103.1
1990	105.3	103.8	102.6	97.4	98.8	98.0	102.1
1991	110.9	109.9	108.6	98.1	97.0	97.3	98.9
1992	116.4	116.2	113.7	97.7	97.8	98.3	98.9
1993	117.5	118.5	114.3	97.0	98.4	98.3	98.9
1994	122.9	125.6	119.4	97.1	95.1	95.6	92.8
1995	126.8	126.6	119.9	94.5	94.7	95.4	91.8
Average annual percent change:							
1983-95	1.9	2.0	1.3	-8	-7	-7	-4
1990-95	3.8	4.1	3.2	-8	-5	-5	-2.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Paperboard Packaging Council, the Bureau of the

Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 60. Paper and plastic bags (SIC 2673, 2674): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	86.1	85.8	77.6	90.1	90.5	90.0	93.3
1973	90.7	89.8	82.7	91.2	92.1	91.2	96.1
1974	95.2	94.0	90.3	94.8	96.0	97.7	89.5
1975	97.2	90.1	81.8	94.1	90.7	91.0	90.4
1976	97.5	93.5	86.2	90.5	94.4	94.5	94.4
1977	97.1	94.8	86.0	88.6	90.7	89.7	95.2
1978	98.8	95.0	88.4	91.3	92.1	91.2	96.1
1979	94.1	91.6	89.6	95.3	97.9	97.1	102.0
1980	91.4	89.3	91.2	98.8	102.1	100.8	107.6
1981	89.0	88.0	89.6	100.7	101.8	100.1	109.7
1982	92.0	88.9	83.1	90.4	93.5	92.2	99.0
1983	99.4	97.7	91.4	92.0	93.6	92.2	100.0
1984	99.9	98.0	89.6	89.7	91.4	89.9	98.0
1985	99.7	98.7	88.9	89.2	90.1	89.0	94.3
1986	101.8	102.8	95.5	93.8	92.9	90.8	101.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.7	98.7	98.5	100.9	99.8	101.4	93.3
1989	93.7	94.1	98.6	105.2	104.8	106.2	99.0
1990	92.2	93.9	96.0	104.1	102.2	103.0	99.0
1991	89.5	91.1	91.6	102.4	100.6	101.2	98.1
1992	93.9	95.9	102.3	108.9	106.7	106.2	108.7
1993	92.0	95.3	103.1	112.1	108.2	107.4	111.5
1994	96.5	99.6	104.4	108.2	104.8	104.4	106.7
1995	91.7	94.2	103.6	113.0	110.1	111.5	103.8
Average annual percent change:							
1972-95	1.4	1.4	2.9	1.5	1.4	1.4	1.7
1980-95	-1	.1	1.5	1.7	1.5	1.6	1.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 61. Industrial inorganic chemicals (SIC 281): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	75.5	74.1	93.6	124.1	126.3	142.1	102.6
1973	79.5	79.2	100.1	125.9	126.3	145.3	98.0
1974	80.9	80.8	108.9	134.6	135.1	152.8	108.4
1975	68.8	65.7	69.6	134.1	136.5	146.9	121.1
1976	73.3	72.4	98.3	134.1	135.7	144.5	122.3
1977	77.7	76.9	103.5	133.3	134.8	146.1	117.3
1978	80.6	80.0	110.5	137.2	138.1	149.3	121.6
1979	82.2	82.2	108.0	128.9	128.9	139.4	113.1
1980	75.7	74.1	102.6	135.6	138.5	145.4	127.9
1981	70.1	69.2	95.9	136.7	138.5	142.6	132.0
1982	68.7	65.1	85.2	127.7	130.9	134.0	128.1
1983	74.6	72.6	90.8	121.8	125.1	128.3	120.7
1984	85.0	84.3	101.1	119.0	120.0	123.6	114.8
1985	84.0	84.2	100.6	119.8	119.6	121.8	116.4
1986	89.0	89.8	98.8	111.0	110.3	110.2	110.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.1	104.0	107.1	107.0	103.0	105.0	100.0
1989	103.2	102.7	107.7	104.4	104.9	107.8	100.4
1990	104.8	105.7	113.1	107.8	107.0	109.5	103.4
1991	99.2	101.2	111.0	112.0	108.7	112.0	106.3
1992	103.5	108.3	114.5	110.6	107.7	109.5	105.0
1993	108.1	110.3	109.8	101.4	99.3	100.3	97.9
1994	109.2	111.0	102.3	93.7	92.1	94.2	89.1
1995	115.1	118.0	104.0	90.3	88.1	92.8	81.1
Average annual percent change:							
1972-95	1.9	2.0	.5	-1.4	-1.8	-1.8	-1.0
1980-95	1.9	2.2	-1.7	-3.5	-3.8	-3.3	-4.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 62. Alkalies and chlorine (SIC 2812): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	38.1	36.7	97.6	255.0	266.0	274.3	246.8
1973	38.4	37.6	100.1	261.0	266.0	276.9	240.0
1974	43.6	43.0	117.7	270.0	274.0	282.6	253.4
1975	34.1	33.6	94.8	278.1	282.1	279.9	286.8
1976	37.4	36.8	97.9	261.9	266.0	251.3	300.0
1977	40.3	39.1	92.3	229.0	236.0	228.6	253.4
1978	43.8	43.1	93.2	212.9	216.0	208.3	233.3
1979	50.8	49.0	73.6	144.9	150.2	142.9	166.7
1980	54.6	49.4	73.1	133.9	148.0	142.9	160.1
1981	44.3	43.3	65.1	147.0	150.2	139.9	173.3
1982	42.2	40.2	61.1	144.9	152.0	142.9	173.3
1983	55.7	54.5	79.5	142.9	146.0	137.0	166.7
1984	66.6	66.6	98.6	148.0	148.0	145.7	153.4
1985	70.8	68.6	112.6	159.0	164.0	160.0	173.3
1986	97.7	94.8	127.1	130.0	134.0	128.6	146.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.6	103.0	133.9	131.8	130.0	125.7	140.0
1989	92.5	95.9	126.6	116.9	132.0	131.4	133.3
1990	92.3	94.2	128.1	138.8	136.0	134.3	140.0
1991	86.2	87.0	130.6	151.4	150.0	148.6	153.3
1992	87.7	87.7	140.3	160.0	160.0	154.3	173.3
1993	84.8	85.0	130.8	154.2	154.0	151.4	160.0
1994	84.1	84.7	105.0	124.9	124.0	120.0	133.3
1995	87.7	84.9	103.5	118.1	122.0	120.0	126.7
Average annual percent change:							
1972-95	3.7	3.7	.3	-3.3	-3.3	-3.5	-2.9
1990-95	-1.0	-2.1	-4.2	-3.2	-2.1	-2.2	-2.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 63. Inorganic pigments (SIC 2816): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	71.3	71.4	110.2	154.6	154.3	176.5	118.7
1973	72.6	75.0	119.3	164.4	159.1	188.4	112.5
1974	73.3	75.4	141.7	193.3	188.0	215.7	143.6
1975	66.1	66.6	99.5	150.5	149.4	162.8	128.2
1976	64.6	65.0	101.1	155.9	155.5	168.8	134.4
1977	64.1	64.4	92.5	144.3	143.5	156.8	122.0
1978	66.6	67.0	97.8	146.8	145.9	160.8	122.0
1979	67.8	68.7	93.6	138.0	136.3	149.2	115.7
1980	65.3	65.0	93.3	143.0	143.5	147.2	137.6
1981	65.8	65.8	93.6	140.0	142.1	145.2	137.6
1982	62.3	60.3	81.5	130.7	135.0	133.3	137.6
1983	69.4	68.7	89.4	126.9	130.1	129.5	131.4
1984	81.4	80.0	91.4	112.3	114.3	117.6	109.4
1985	84.4	82.8	96.8	114.8	116.9	117.6	115.7
1986	88.6	88.7	97.3	109.8	109.7	109.9	109.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.3	104.3	111.8	108.2	107.2	105.9	109.4
1989	107.8	104.6	110.9	103.0	106.0	100.0	115.6
1990	104.5	107.1	109.7	104.9	102.4	103.9	100.0
1991	98.9	101.8	103.1	104.2	101.2	100.0	103.1
1992	107.8	113.9	118.1	109.5	103.6	109.8	93.8
1993	107.8	111.8	117.1	108.7	104.8	109.8	96.9
1994	115.0	116.7	120.9	105.1	103.6	111.8	90.6
1995	108.1	108.2	112.1	103.8	103.6	109.8	93.8
Average annual percent change:							
1972-95	1.8	1.8	.1	-1.7	-1.7	-2.0	-1.0
1990-95	.7	.2	.4	-2	-2	1.1	-1.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 64. Industrial inorganic chemicals, not elsewhere classified (SIC 2819 part): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	85.6	84.5	67.7	102.4	103.7	115.9	84.7
1973	90.6	89.5	94.1	103.9	105.2	116.2	88.0
1974	93.9	92.9	103.8	110.5	111.7	123.4	94.0
1975	76.0	74.0	89.1	117.3	120.4	126.1	111.3
1976	85.1	83.6	102.1	120.0	122.1	127.1	114.7
1977	89.9	89.0	114.0	126.9	128.1	136.4	115.3
1978	92.6	91.7	123.7	133.6	134.9	143.0	122.7
1979	91.5	91.9	121.9	133.2	132.6	140.4	120.7
1980	83.3	82.2	118.4	142.2	144.0	148.2	138.0
1981	77.1	76.4	106.6	140.9	142.2	143.8	140.0
1982	71.0	68.7	93.3	131.4	135.7	137.4	133.3
1983	77.5	74.4	95.9	123.8	128.9	131.7	124.7
1984	88.4	87.5	106.8	120.8	122.1	123.6	120.0
1985	87.3	87.5	102.7	117.6	117.4	118.4	116.0
1986	88.6	89.9	97.1	109.6	108.0	109.1	106.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.5	102.9	102.1	104.7	99.2	100.9	96.7
1989	105.9	104.9	105.7	99.8	100.8	104.3	95.3
1990	109.0	109.9	113.6	104.2	103.4	105.2	100.7
1991	102.3	104.7	110.4	107.9	105.5	107.3	102.7
1992	104.8	107.6	112.4	107.2	104.4	103.4	106.0
1993	110.7	113.1	103.6	93.6	91.6	90.1	94.0
1994	113.2	115.3	96.9	85.6	84.1	84.5	83.3
1995	126.5	131.4	102.2	80.8	77.8	82.8	70.0
Average annual percent change:							
1972-95	1.7	1.9	.7	-1.0	-1.2	-1.5	-8
1990-95	3.0	3.6	-2.1	-5.0	-5.5	-4.7	-7.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 65. Synthetic fibers (SIC 2823, 2824): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	31.3	30.6	56.2	179.5	183.8	186.8	173.8
1973	38.4	37.8	71.6	186.3	189.5	194.6	175.5
1974	41.7	40.3	78.6	188.4	195.2	196.8	190.6
1975	46.9	44.2	73.3	156.4	165.8	161.8	178.5
1976	51.9	48.8	80.8	155.9	165.5	161.8	177.7
1977	59.1	56.6	91.1	154.0	161.0	160.2	163.9
1978	64.6	62.0	99.3	153.6	160.1	159.9	160.9
1979	70.9	68.3	107.3	151.4	157.0	157.5	155.9
1980	71.2	67.7	98.4	138.3	145.4	143.4	152.2
1981	71.9	68.2	95.4	132.6	139.8	137.5	147.1
1982	63.9	59.3	79.0	123.5	133.2	128.0	148.6
1983	79.0	74.5	92.9	117.7	124.8	121.9	133.4
1984	79.8	76.9	92.7	116.2	120.5	118.3	127.6
1985	79.3	76.6	86.4	108.9	112.8	109.2	123.2
1986	80.9	88.2	94.7	104.3	107.3	106.1	110.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.9	102.5	102.7	99.7	100.2	100.5	99.3
1989	104.1	102.0	107.1	103.0	105.0	105.5	103.6
1990	98.7	97.7	101.1	102.5	103.6	102.9	105.8
1991	97.5	96.1	99.0	101.5	103.0	101.4	108.0
1992	99.3	101.3	100.4	101.1	99.1	99.0	99.3
1993	112.3	113.5	104.6	93.2	92.3	94.5	85.5
1994	119.4	124.5	104.5	87.5	83.9	86.9	74.6
1995	125.7	131.5	105.2	83.7	80.0	83.1	70.3
Average annual percent change:							
1988-95	5.8	6.0	4.9	-9	-1.0	-9	-1.6
1990-95	5.0	6.1	.8	-4.0	-5.5	-4.2	-7.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Fiber Economics Bureau, Inc. and the Bureau of

the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 66. Soaps and detergents (SIC 2841): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	83.6	81.9	74.1	88.7	80.5	82.8	86.5
1973	89.1	87.9	79.9	89.6	90.9	92.4	88.3
1974	93.4	91.9	82.1	87.9	89.3	91.7	85.3
1975	86.6	85.4	74.1	85.6	86.8	89.5	82.2
1976	89.0	88.2	78.1	87.8	88.6	89.5	87.1
1977	89.2	88.4	80.4	90.1	90.9	90.8	91.4
1978	93.6	93.3	86.5	92.4	92.7	94.6	89.6
1979	91.0	90.4	85.7	94.1	94.8	97.1	90.8
1980	95.2	93.4	91.5	96.1	98.0	100.0	94.5
1981	92.0	90.1	90.7	98.6	100.7	104.7	93.9
1982	87.9	86.9	85.7	97.5	98.6	102.2	92.6
1983	95.5	97.7	92.3	96.2	98.4	98.9	92.0
1984	90.5	91.6	85.6	94.5	93.4	96.4	88.3
1985	91.5	92.0	87.4	95.5	95.0	96.0	93.3
1986	92.3	93.2	90.4	98.0	97.0	98.2	95.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.4	101.8	101.6	99.2	99.8	98.2	102.5
1989	109.4	107.4	104.9	95.9	97.7	97.1	98.8
1990	125.2	125.6	121.6	94.9	98.8	98.9	93.3
1991	126.4	122.9	119.3	94.3	97.0	98.6	94.5
1992	115.3	112.3	109.0	94.6	97.0	96.8	97.5
1993	112.6	110.9	112.9	100.3	101.8	98.6	107.4
1994	111.7	109.2	107.2	95.9	98.2	90.6	111.0
1995	126.0	122.3	118.1	93.7	96.6	96.3	114.1
Average annual percent change:							
1988-95	2.2	2.2	3.0	.8	8	-3	1.6
1980-95	-3	-5	-6	-3	0	-2.7	4.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 67. Cosmetics and other toiletries (SIC 2844): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	85.3	85.1	63.0	73.9	74.1	60.3	105.9
1973	88.8	88.5	67.4	76.1	76.2	60.5	112.3
1974	91.8	92.2	69.3	75.4	75.1	64.3	100.0
1975	82.2	82.5	67.3	73.0	72.8	63.5	94.1
1976	91.9	92.3	72.9	79.3	79.0	69.9	100.0
1977	98.4	95.8	75.8	78.4	78.9	69.9	99.5
1978	98.2	91.7	80.9	82.4	83.6	75.0	103.4
1979	92.8	91.5	78.9	84.3	85.3	75.2	108.3
1980	83.8	84.1	71.5	85.4	85.1	77.1	103.4
1981	78.5	78.2	73.2	80.3	83.6	65.9	104.4
1982	86.3	86.1	79.7	82.4	82.6	87.8	103.4
1983	88.7	89.5	83.2	82.8	83.0	88.2	103.9
1984	87.3	87.4	86.3	88.8	88.7	98.2	104.4
1985	90.3	89.6	88.7	88.3	89.0	98.6	104.4
1986	98.6	98.8	91.4	94.6	95.4	94.2	98.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.2	102.6	110.2	104.8	107.4	107.7	106.9
1989	102.7	100.8	106.6	106.9	108.9	105.6	116.7
1990	101.1	101.4	108.2	107.0	106.7	99.4	123.5
1991	103.9	104.8	108.0	102.0	101.3	92.9	120.6
1992	106.4	110.7	113.0	104.2	102.1	92.7	123.5
1993	108.5	112.8	116.1	107.0	103.1	95.3	121.1
1994	111.6	115.0	117.1	104.9	101.8	97.4	111.8
1995	115.2	117.8	119.8	104.0	101.8	98.1	110.3
Average annual percent change:							
1988-95	2.7	2.8	5.1	2.3	2.3	2.4	2.0
1980-95	2.6	3.0	2.1	-6	-6	-3	-2.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 68. Paints and allied products (SIC 285): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.7	68.4	61.7	120.7	119.5	127.9	110.4
1973	63.2	62.6	78.6	124.4	125.7	138.1	112.3
1974	68.9	69.6	81.9	118.8	117.6	123.7	111.2
1975	71.7	71.9	78.0	108.8	108.6	110.0	107.1
1976	73.9	74.7	81.7	110.6	109.5	112.9	106.0
1977	78.5	78.8	87.6	111.8	111.4	116.7	105.6
1978	79.8	79.8	89.0	111.6	111.6	116.3	106.3
1979	79.8	79.4	90.7	113.6	114.3	122.9	125.2
1980	77.3	76.4	86.3	111.6	112.9	115.5	110.0
1981	76.6	76.1	82.9	108.2	108.9	111.2	106.3
1982	81.9	80.9	79.2	95.8	96.0	97.5	96.5
1983	87.7	86.8	84.4	95.3	97.3	97.2	97.0
1984	93.6	97.9	93.1	95.4	100.2	102.7	97.4
1985	96.9	96.1	96.8	99.9	100.7	102.4	98.5
1986	98.0	97.7	98.9	100.9	101.2	101.8	100.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.4	101.7	102.8	101.4	101.1	102.0	100.3
1989	103.3	103.6	103.2	99.9	99.7	102.6	96.9
1990	108.1	126.7	104.3	98.1	97.8	100.7	95.0
1991	104.3	104.6	97.6	93.5	93.3	96.7	89.9
1992	102.9	103.0	96.2	93.5	93.4	99.0	88.1
1993	108.8	109.7	101.8	93.6	92.8	99.0	86.8
1994	116.7	119.1	109.2	93.5	91.7	98.0	85.5
1995	115.6	118.2	107.0	91.8	90.6	96.7	84.6
Average annual percent change:							
1958-95	2.7	2.7	2.4	-4	-3	-4	-3
1990-95	1.9	2.1	5	-1.3	-1.5	-1.8	-2.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 69. Industrial organic chemicals, not elsewhere classified (SIC 2869): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	65.7	64.4	70.4	107.1	109.3	119.2	95.7
1973	73.1	72.9	80.1	109.6	109.8	122.2	92.7
1974	84.0	84.2	92.1	109.7	109.4	121.4	93.1
1975	68.8	68.5	76.7	109.8	111.9	120.0	101.3
1976	78.5	75.8	86.2	115.3	116.8	127.2	102.6
1977	82.2	81.7	97.9	119.0	119.8	130.8	105.1
1978	85.5	85.2	103.5	121.0	121.5	130.0	110.2
1979	93.0	92.7	113.9	122.5	122.9	132.9	109.6
1980	81.3	80.0	100.1	123.2	125.2	130.9	117.1
1981	84.4	85.0	102.8	119.0	118.6	124.3	113.1
1982	70.5	68.9	82.2	116.6	119.3	120.2	118.2
1983	84.2	82.8	94.2	111.9	113.8	116.2	110.6
1984	89.6	88.4	97.8	108.9	110.4	112.3	107.8
1985	87.8	86.5	89.0	101.4	103.0	104.1	101.4
1986	92.3	92.1	85.2	92.3	92.5	94.8	89.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	110.5	110.9	108.7	98.3	98.0	105.4	89.4
1989	110.5	111.7	115.0	104.1	103.0	109.4	95.4
1990	99.0	100.5	108.5	108.5	107.9	108.0	107.8
1991	92.6	94.0	102.2	110.3	108.8	101.0	117.9
1992	91.6	92.4	100.9	110.1	108.2	95.1	125.7
1993	98.5	99.3	99.5	107.9	106.9	99.8	115.2
1994	98.2	97.5	99.5	103.4	102.0	102.4	101.5
1995	93.3	94.3	97.4	104.4	103.3	107.1	98.9
Average annual percent change:							
1953-95	2.9	2.9	3.4	.4	.4	.1	.9
1990-95	-1.2	-1.3	-2.1	-1.8	-1.5	-1.2	-1.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 70. Agricultural chemicals (SIC 287): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	58.3	58.1	69.1	118.5	118.0	126.6	126.9
1973	66.8	67.3	78.3	117.1	116.2	125.1	122.4
1974	73.2	73.4	90.6	123.8	123.4	135.7	124.4
1975	65.9	65.9	85.2	129.3	129.4	139.4	123.7
1976	70.8	71.2	92.0	129.9	129.1	137.0	127.0
1977	75.2	74.8	100.1	133.0	133.8	145.1	116.4
1978	77.6	77.0	101.8	131.2	132.3	140.9	118.8
1979	77.3	78.0	102.8	133.0	131.8	143.1	114.3
1980	75.3	77.5	106.7	141.6	137.7	146.1	124.5
1981	75.4	77.7	107.0	141.8	137.7	146.1	124.5
1982	73.1	72.0	91.2	124.7	126.6	129.9	121.4
1983	82.3	80.4	91.6	111.3	113.9	117.5	108.0
1984	94.9	93.7	105.6	111.3	112.7	118.1	104.4
1985	92.4	90.6	101.0	109.2	111.4	115.6	105.0
1986	88.2	85.0	89.3	101.2	101.5	103.1	86.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.3	103.6	105.1	102.8	101.5	102.4	100.0
1989	102.1	104.1	106.4	106.2	104.2	105.7	101.9
1990	105.5	108.6	115.0	149.0	105.9	109.4	100.6
1991	106.0	110.8	111.9	105.6	101.0	102.9	98.1
1992	109.9	114.5	114.2	103.9	99.8	102.9	95.0
1993	113.5	117.8	114.8	100.9	97.5	101.2	91.8
1994	114.5	117.8	115.3	100.7	98.0	104.1	88.7
1995	116.3	119.2	115.3	99.2	96.8	104.1	85.5
Average annual percent change:							
1972-95	3.0	3.2	2.3	-8	-9	-8	-10
1980-95	2.0	1.9	.1	-1.9	-1.8	-1.0	-3.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 71. Nitrogenous fertilizers (SIC 2873): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	58.5	59.5	75.4	129.8	126.8	135.7	114.0
1973	65.4	67.4	83.8	128.2	124.3	140.1	100.0
1974	69.4	69.8	95.0	136.9	136.5	156.0	103.5
1975	65.4	66.6	95.3	145.6	143.1	158.0	120.8
1976	64.8	66.1	103.9	160.3	152.5	164.7	134.8
1977	67.2	68.3	111.5	166.8	163.3	176.8	145.0
1978	70.0	69.	113.7	162.4	163.3	166.6	158.7
1979	72.7	72.6	108.6	149.5	149.7	158.0	137.9
1980	80.5	80.4	94.4	148.4	148.6	160.1	131.1
1981	76.9	79.8	115.0	149.5	144.4	151.3	134.8
1982	73.8	73.8	103.3	140.3	140.4	140.1	141.4
1983	84.1	82.9	97.6	116.1	117.7	113.3	124.2
1984	101.1	99.5	114.1	112.8	114.7	115.4	114.0
1985	100.7	97.5	114.8	114.0	117.7	120.0	114.0
1986	90.5	91.9	81.9	98.6	89.2	88.9	89.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.3	102.8	100.1	98.8	97.3	97.5	96.6
1989	103.3	106.3	102.0	98.8	95.9	97.8	93.1
1990	107.7	109.4	110.9	102.9	101.4	106.7	93.1
1991	108.4	111.1	109.6	101.0	98.6	104.4	89.7
1992	111.6	113.6	107.5	98.1	94.6	104.4	79.3
1993	117.5	120.9	114.4	97.4	94.6	104.4	79.3
1994	111.1	114.1	123.4	111.0	120.1	120.0	89.7
1995	107.6	115.0	113.5	105.5	98.6	113.3	75.9
Average annual percent change:							
1972-95	2.7	2.9	1.8	-8	-1.1	-8	-1.8
1980-95	0	1.0	.5	.5	-1.8	1.2	-4.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 72. Phosphate fertilizers (SIC 2874): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	51.3	51.4	82.4	160.5	160.3	177.1	128.0
1973	62.4	63.4	89.3	143.0	140.9	157.4	109.3
1974	69.2	70.6	112.4	162.5	159.2	182.0	115.5
1975	56.7	56.3	87.1	171.3	172.3	191.7	134.3
1976	63.4	62.9	120.2	158.9	160.3	175.4	131.2
1977	71.2	71.3	115.5	155.2	154.9	165.7	134.3
1978	70.0	70.8	115.4	157.8	156.0	167.2	134.3
1979	68.3	70.1	112.3	164.3	160.3	172.2	137.4
1980	67.6	70.8	118.8	175.6	167.8	180.3	141.7
1981	61.0	63.3	106.3	174.1	167.8	177.1	143.9
1982	62.5	60.8	93.5	149.5	153.8	159.0	143.7
1983	77.4	76.0	105.5	136.3	138.8	149.1	118.7
1984	88.4	87.3	122.0	138.0	139.8	145.9	128.0
1985	84.2	81.7	114.3	135.7	139.8	142.6	134.3
1986	79.5	77.3	93.9	117.9	121.5	119.7	125.0
1987	100.0	100.0	99.0	100.0	100.0	100.0	100.0
1988	92.0	94.4	104.4	113.5	110.6	114.5	103.1
1989	83.3	84.1	97.5	116.9	116.0	121.0	106.3
1990	99.7	104.8	117.1	117.5	111.7	121.0	93.8
1991	107.3	111.9	122.7	114.3	109.6	117.7	93.8
1992	105.0	113.6	114.9	109.4	101.1	108.1	87.5
1993	106.0	108.6	108.6	92.5	100.0	106.5	87.5
1994	122.6	126.7	114.6	93.5	90.4	103.0	71.9
1995	118.1	125.7	115.0	97.3	91.5	104.8	65.6
Average annual percent change:							
1972-95	3.7	4.0	1.5	-2.2	-2.4	-2.3	-2.9
1980-95	3.4	3.7	-4	-3.7	-3.9	-2.8	-6.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 73. Fertilizers, mixing only (SIC 2875): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	85.8	83.7	127.2	148.2	152.0	153.3	149.9
1973	80.5	89.1	142.7	157.7	160.1	163.9	153.5
1974	103.4	99.5	147.4	142.6	148.1	153.3	139.2
1975	102.7	98.3	145.6	141.8	148.1	151.2	142.7
1976	110.3	107.4	149.1	135.2	138.8	142.5	132.0
1977	105.7	103.3	171.0	161.7	165.5	172.4	153.5
1978	107.4	104.3	151.7	141.3	145.5	148.9	139.2
1979	110.9	114.0	158.2	142.6	138.8	151.2	117.8
1980	90.6	98.1	164.9	178.1	168.1	163.9	175.0
1981	83.5	88.2	141.3	169.2	160.1	157.5	164.2
1982	79.3	78.8	103.0	129.9	130.7	127.7	135.7
1983	91.0	88.3	109.6	130.4	124.2	123.5	125.0
1984	97.8	95.6	108.3	110.8	113.3	117.1	107.1
1985	100.8	98.9	108.2	107.4	109.4	110.7	107.1
1986	95.1	94.6	103.5	108.8	109.4	108.6	110.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.7	103.2	103.2	98.6	100.0	100.0	100.0
1989	112.4	115.1	99.8	98.8	86.7	87.2	85.7
1990	112.8	118.3	112.0	99.3	94.7	91.5	100.0
1991	114.6	120.7	107.8	94.1	89.3	87.2	92.9
1992	127.1	134.8	124.0	97.5	92.0	89.4	96.4
1993	139.1	146.9	131.3	94.4	89.3	91.5	85.7
1994	118.8	123.6	129.6	108.2	104.0	106.5	96.4
1995	119.0	118.0	132.1	110.2	112.0	110.6	114.3
Average annual percent change:							
1972-95	1.5	1.5	2	-1.3	-1.3	-1.4	-1.2
1980-95	1.2	-1	3.4	2.1	3.4	3.9	2.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 74. Agricultural chemicals, not elsewhere classified (SIC 2879): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	84.0	82.4	47.2	73.8	75.7	74.7	77.2
1973	74.3	73.5	57.0	76.7	77.8	75.8	80.0
1974	76.7	78.7	66.8	84.9	84.9	84.6	85.8
1975	69.8	70.2	62.6	89.7	89.3	89.0	90.0
1976	75.6	75.2	72.0	95.2	95.7	94.6	97.2
1977	94.2	81.9	6.2	90.4	93.0	102.2	81.3
1978	88.2	85.6	14.0	95.2	98.1	106.6	87.2
1979	83.6	81.9	85.0	101.6	103.7	112.3	82.9
1980	91.2	80.6	81.5	100.3	101.1	107.8	82.9
1981	74.5	82.9	99.3	105.1	106.9	117.7	82.9
1982	81.3	82.0	84.0	99.7	102.5	106.6	97.2
1983	87.1	84.0	78.1	89.7	93.0	95.6	90.0
1984	98.8	88.4	93.5	94.6	95.0	101.1	87.2
1985	92.9	92.2	85.7	92.3	93.0	97.9	87.2
1986	93.2	93.9	86.3	92.6	91.9	96.7	85.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	108.4	108.8	108.4	100.0	98.8	97.8	100.0
1989	108.9	110.8	121.1	111.3	109.3	108.8	110.0
1990	106.2	107.5	118.2	111.2	106.9	112.1	107.1
1991	102.2	107.5	110.1	107.8	102.5	100.0	105.7
1992	108.4	110.8	116.3	107.4	105.0	105.5	104.3
1993	111.0	114.8	116.2	104.7	101.2	101.1	101.1
1994	115.6	117.6	111.7	96.6	95.0	96.7	92.9
1995	124.9	125.1	115.0	92.1	91.9	95.6	87.1
Average annual percent change:							
1972-95	2.9	3.1	3.9	1.0	8	1.1	5
1990-95	3.3	3.1	-5	-3.7	-3.5	-3.1	-4.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 75. Petroleum refining (SIC 291): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	76.6	75.7	92.1	120.3	121.7	118.7	120.7
1973	84.0	82.1	97.0	115.5	118.2	114.3	118.8
1974	76.9	75.9	94.2	122.5	124.1	122.0	121.0
1975	80.0	78.0	94.7	118.3	121.4	118.6	124.4
1976	83.0	82.8	101.6	120.5	122.8	118.2	125.6
1977	88.7	87.7	108.6	122.4	123.8	118.1	129.1
1978	88.7	89.4	109.8	123.7	122.8	117.0	128.4
1979	82.6	82.6	106.1	130.8	130.8	121.4	144.7
1980	81.7	81.2	100.7	123.3	124.0	115.9	135.2
1981	72.7	72.8	95.7	131.7	131.4	121.0	147.6
1982	69.9	69.8	91.6	131.1	131.2	118.9	152.4
1983	71.5	71.2	90.1	126.1	126.4	115.0	146.0
1984	78.7	77.8	93.9	119.4	120.7	106.1	146.0
1985	84.7	83.2	94.0	111.0	113.0	102.8	130.6
1986	94.9	94.8	98.3	104.6	104.7	99.8	113.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.3	106.3	102.5	97.4	96.5	96.9	95.8
1989	109.6	110.3	103.3	94.3	93.7	94.0	93.2
1990	109.2	110.5	104.0	95.3	94.1	94.6	93.2
1991	106.6	107.2	104.1	97.8	97.0	96.9	97.4
1992	111.3	111.1	105.7	95.0	95.2	96.9	92.3
1993	120.1	121.0	108.4	90.2	89.6	90.7	87.7
1994	123.8	124.6	108.4	87.5	87.0	87.5	86.0
1995	133.0	132.6	109.9	80.7	80.9	81.0	82.7
Average annual percent change:							
1947-95	4.1	4.1	2.4	-1.8	-1.8	-1.7	-1.9
1990-95	4.0	3.7	1.1	-2.8	-2.5	-2.6	-2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 76. Tires and inner tubes (SIC 301): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	57.7	58.9	58.9	167.9	164.3	158.3	150.7
1973	56.0	55.7	57.7	174.4	175.3	168.0	205.4
1974	54.8	55.3	56.0	180.7	179.1	170.9	214.8
1975	54.1	52.8	55.7	158.4	162.4	152.0	203.8
1976	59.2	53.7	55.1	143.8	158.7	149.8	196.0
1977	59.5	60.0	104.6	175.8	174.3	166.0	200.9
1978	64.3	64.8	101.5	157.9	157.2	154.2	170.3
1979	63.9	62.3	56.3	153.7	157.7	154.2	173.5
1980	60.7	57.5	76.7	126.4	133.3	126.0	164.9
1981	70.0	67.9	82.4	117.6	121.3	118.7	132.8
1982	78.2	72.5	77.9	162.2	167.5	163.8	122.7
1983	81.4	81.6	83.6	152.7	162.5	159.4	114.8
1984	88.8	89.8	94.6	158.8	157.6	157.2	110.2
1985	89.3	86.1	92.5	163.8	167.5	166.3	112.5
1986	92.6	90.2	89.9	97.1	99.7	98.3	105.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.9	104.7	103.0	150.1	98.4	99.8	94.6
1989	103.8	103.5	103.4	99.7	99.9	104.6	88.0
1990	103.0	101.1	100.2	97.3	99.2	101.5	93.4
1991	102.4	99.1	93.8	91.6	94.7	97.0	88.8
1992	107.8	109.3	104.4	96.8	95.5	99.5	85.5
1993	116.5	116.0	111.1	97.3	95.8	99.0	87.6
1994	124.1	125.7	115.6	93.1	92.5	93.1	90.9
1995	131.4	132.2	123.6	94.1	93.5	94.6	90.9
Average annual percent change:							
1987-95	3.8	3.8	2.4	-1.4	-1.4	-1.4	-1.3
1990-95	5.0	5.5	4.3	-7	-1.2	-1.4	-5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Rubber Manufacturers Association and the

Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 77. Rubber and plastic hose and belting (SIC 3052): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	73.2	73.2	100.6	137.3	137.3	136.2	140.7
1973	78.4	76.0	98.6	125.8	129.7	133.3	120.9
1974	83.6	82.3	110.6	132.3	134.4	140.4	119.4
1975	86.1	82.8	97.2	112.8	117.3	117.1	118.0
1976	88.6	81.6	105.1	121.4	128.8	125.4	137.6
1977	84.0	81.6	121.0	144.1	148.2	141.0	166.4
1978	82.2	80.9	133.1	161.9	164.5	154.8	189.0
1979	81.9	80.4	134.1	163.7	166.7	156.7	192.3
1980	76.3	73.2	102.2	133.9	139.6	128.5	167.8
1981	98.7	95.2	110.3	111.7	115.9	121.7	101.3
1982	87.8	81.3	87.2	99.3	107.3	106.6	109.1
1983	97.7	92.3	88.7	90.8	96.1	95.7	96.8
1984	104.9	101.5	108.0	103.0	106.4	109.1	100.0
1985	100.1	96.5	99.0	98.9	102.6	104.2	98.5
1986	102.1	100.0	99.1	97.1	99.1	100.6	95.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	108.2	110.9	110.9	102.5	100.0	118.4	89.1
1989	97.8	98.5	101.6	103.9	103.2	122.8	70.2
1990	103.3	103.7	102.8	99.6	99.2	118.4	67.0
1991	96.1	95.3	88.8	92.5	93.3	92.0	81.7
1992	104.3	103.8	96.8	92.8	93.3	113.3	89.6
1993	111.3	111.5	105.3	94.6	94.4	116.5	57.4
1994	102.9	106.4	106.5	105.5	102.0	127.8	58.5
1995	100.0	103.9	113.0	110.8	108.7	130.4	63.6
Average annual percent change:							
1987-95	1.5	1.5	.5	-9	-1.0	0	-3.4
1990-95	-3	-3	1.9	2.2	1.8	2.7	-1.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 78. Miscellaneous plastics products, not elsewhere classified (SIC 308): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.9	67.1	39.2	57.7	58.4	59.4	54.2
1973	72.8	71.7	45.9	64.5	65.5	66.9	60.2
1974	67.7	65.9	43.1	63.7	65.5	66.1	62.8
1975	66.7	64.9	37.1	55.7	57.2	56.1	61.2
1976	69.4	68.1	44.3	63.8	65.0	65.0	64.7
1977	77.7	76.5	55.1	70.9	72.0	72.6	69.6
1978	78.3	77.3	61.1	78.0	79.0	79.8	75.7
1979	74.3	72.9	60.7	81.7	83.2	84.0	80.0
1980	75.1	73.3	57.8	76.7	78.6	78.1	80.0
1981	76.5	74.9	61.0	79.7	81.4	81.2	81.5
1982	85.5	82.7	64.0	74.8	77.3	76.5	80.7
1983	84.1	84.1	68.5	81.5	81.5	81.5	81.5
1984	86.4	86.7	79.0	91.5	91.2	92.2	87.6
1985	88.2	87.7	81.8	92.8	93.3	93.7	91.7
1986	88.9	88.8	85.3	96.0	96.1	96.5	94.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.1	100.1	103.5	103.4	103.4	103.9	101.8
1989	101.1	100.9	107.2	106.1	106.3	106.6	104.9
1990	105.3	104.5	111.7	106.1	106.9	106.9	106.9
1991	107.5	107.1	111.8	104.0	104.4	103.3	106.3
1992	114.0	114.2	121.7	106.8	106.6	105.7	110.0
1993	116.2	117.3	130.7	112.5	111.5	110.8	114.0
1994	119.8	121.8	143.8	120.0	118.0	118.0	118.1
1995	120.2	120.2	145.5	121.0	121.0	120.8	121.7
Average annual percent change:							
1972-95	2.5	2.6	5.9	3.3	3.2	3.1	3.6
1990-95	2.7	2.8	5.4	2.7	2.5	2.5	2.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 79. Footwear, except rubber (SIC 314): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	92.9	93.1	230.5	248.0	247.6	252.7	214.6
1973	90.7	89.5	213.7	235.6	238.7	243.2	209.1
1974	89.5	86.8	197.8	220.9	227.8	230.2	211.3
1975	93.6	90.1	184.6	197.1	204.8	207.8	184.1
1976	94.6	91.1	191.7	202.6	210.4	214.0	184.1
1977	94.8	90.8	185.7	196.0	204.6	207.8	181.9
1978	97.0	91.8	185.6	191.4	202.2	206.7	170.9
1979	94.5	89.8	174.6	184.7	194.5	196.5	180.8
1980	93.5	89.0	169.0	180.7	189.9	191.2	179.9
1981	90.3	87.2	163.7	181.2	187.7	189.5	174.2
1982	99.7	93.3	159.1	159.5	170.6	172.7	157.2
1983	97.2	92.7	147.7	152.0	159.4	161.0	149.4
1984	98.8	92.9	132.1	133.4	142.3	143.0	139.3
1985	100.3	95.8	115.9	115.5	121.0	121.8	116.8
1986	101.9	96.2	102.7	100.8	106.7	106.2	110.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.3	101.0	99.3	97.1	98.3	97.2	105.1
1989	100.9	99.8	91.9	91.1	92.1	91.3	97.4
1990	92.8	89.9	79.2	85.4	88.1	86.8	95.7
1991	93.1	89.7	72.0	77.3	80.2	78.4	91.5
1992	93.3	91.6	70.2	75.2	76.6	74.1	92.3
1993	96.4	97.2	71.9	74.6	74.0	70.9	93.2
1994	106.0	105.2	72.3	88.2	88.7	85.5	88.0
1995	101.2	99.9	82.8	82.0	82.8	89.4	83.8
Average annual percent change:							
1947-95	1.0	.9	-2.5	-3.5	-3.4	-3.7	-2.0
1990-95	1.7	2.1	-4.5	-6.2	-6.5	-7.3	-2.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 80. Glass containers (SIC 3221): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	71.8	72.6	128.9	179.6	177.6	179.1	164.5
1973	75.2	74.6	132.6	176.3	177.8	179.1	168.4
1974	80.8	79.8	131.4	162.6	164.6	165.8	154.8
1975	80.3	77.3	131.7	164.0	170.4	171.7	160.7
1976	80.2	80.6	139.9	174.3	173.5	175.3	160.7
1977	81.9	80.2	138.3	168.9	172.4	173.5	162.5
1978	81.3	81.3	144.0	177.0	177.1	178.7	164.5
1979	83.8	82.9	136.6	163.0	164.7	166.0	154.8
1980	85.9	85.2	133.7	155.7	157.0	156.8	156.7
1981	89.7	88.2	130.9	145.9	148.5	148.2	148.9
1982	86.1	85.5	123.0	142.9	143.9	143.9	143.1
1983	85.4	85.1	114.0	133.4	134.0	133.7	135.2
1984	97.4	94.0	111.0	113.9	118.1	117.6	121.5
1985	93.4	94.8	101.7	108.9	107.3	106.9	109.7
1986	98.5	100.2	104.4	106.0	104.2	105.0	98.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.6	99.1	97.6	98.0	98.4	99.3	91.1
1989	101.6	103.0	97.5	95.9	94.7	95.5	86.7
1990	107.5	109.2	96.8	90.0	88.6	89.1	84.4
1991	106.1	110.7	92.9	86.0	84.0	84.4	80.0
1992	111.5	115.6	93.2	83.6	80.6	80.7	80.0
1993	106.0	110.6	87.5	82.5	79.1	78.7	82.2
1994	111.0	116.8	86.4	77.8	73.9	73.5	77.8
1995	109.9	116.5	79.9	72.8	68.6	68.3	71.1
Average annual percent change:							
1947-95	1.6	1.6	.5	-1.1	-1.1	-1.1	-.7
1990-95	.4	1.3	-3.8	-4.2	-5.0	-5.2	-3.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 81. Hydraulic cement (SIC 324): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.9	67.4	105.9	155.9	157.1	167.8	124.0
1973	71.3	70.6	109.7	153.9	155.4	165.0	126.1
1974	65.3	63.8	103.6	158.6	162.4	171.8	132.8
1975	60.6	58.0	87.2	144.0	150.3	157.2	128.3
1976	66.1	63.5	93.4	141.3	147.2	153.9	126.1
1977	71.5	69.2	100.8	141.0	145.6	153.1	121.8
1978	72.5	71.6	107.6	148.4	150.3	158.1	126.2
1979	68.7	67.9	108.2	157.6	159.3	169.2	128.3
1980	62.3	60.5	98.3	154.5	159.3	166.8	134.8
1981	65.3	62.5	92.1	141.0	147.2	153.9	126.2
1982	67.4	63.0	81.2	120.5	128.9	131.8	119.6
1983	77.5	74.3	89.9	116.0	121.0	122.8	115.3
1984	89.4	83.8	99.3	111.0	118.4	119.9	113.0
1985	91.8	89.5	99.5	108.4	111.1	109.6	115.3
1986	97.1	97.4	100.6	103.6	103.2	102.8	104.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.2	104.3	98.3	95.2	94.2	93.1	97.9
1989	110.2	109.9	98.8	89.7	89.9	88.8	93.6
1990	112.4	112.8	98.6	87.7	87.4	86.9	89.4
1991	108.3	108.2	94.1	86.9	87.0	85.6	91.5
1992	115.1	115.7	99.0	86.0	85.5	85.0	87.2
1993	119.9	121.4	105.0	87.6	86.5	86.3	87.2
1994	125.6	128.5	111.1	88.5	88.5	85.0	91.5
1995	123.4	128.2	109.6	88.9	85.5	83.8	91.5
Average annual percent change:							
1947-95	3.7	3.7	1.7	-1.9	-1.9	-2.2	-.4
1990-95	1.9	2.6	2.1	.3	-.4	-.7	.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

**Table 82. Structural clay products (SIC 325): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	78.3	78.2	117.2	149.8	149.9	154.6	131.0
1973	81.5	80.7	120.1	147.4	148.8	156.5	119.7
1974	84.2	83.5	126.3	150.0	151.2	156.5	131.0
1975	81.9	79.6	107.4	131.0	134.9	136.1	131.0
1976	84.7	81.5	110.2	130.2	135.3	136.9	129.7
1977	90.2	98.6	115.4	128.0	130.3	133.2	119.7
1978	92.8	92.3	124.2	133.9	134.5	139.3	115.5
1979	86.9	84.1	118.8	136.6	141.3	144.5	129.5
1980	87.7	85.4	107.1	122.1	125.4	124.2	131.0
1981	91.1	88.4	99.8	109.5	112.9	113.2	119.2
1982	90.6	87.8	75.8	83.7	86.4	85.1	91.6
1983	92.2	93.0	87.6	95.1	94.2	92.0	102.7
1984	96.2	95.5	99.4	103.3	104.1	106.6	94.4
1985	95.1	95.4	99.3	104.4	104.1	105.1	100.0
1986	96.5	96.4	105.7	109.5	109.7	109.1	111.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.6	102.6	101.1	96.6	98.6	99.3	95.8
1989	99.2	99.7	101.4	102.2	101.7	102.5	98.6
1990	103.2	102.3	100.5	97.4	98.3	97.8	100.0
1991	98.5	96.7	88.6	90.0	91.6	89.8	98.6
1992	100.0	99.2	88.9	88.9	89.6	87.3	98.6
1993	99.5	100.0	87.9	88.3	87.9	85.8	95.8
1994	108.6	111.2	97.7	90.0	87.9	86.9	91.5
1995	108.1	108.6	99.5	92.1	91.6	90.9	94.4
Average annual percent change:							
1958-95	2.2	2.3	.1	-2.0	-2.1	-2.3	-1.2
1990-95	.9	1.2	.2	-1.1	-1.4	-1.5	-1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 83. Clay construction products (SIC 3251, 3253, 3259): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	77.1	77.2	111.1	144.2	143.9	149.1	122.2
1973	78.5	77.6	111.1	141.5	143.2	149.6	116.7
1974	76.5	76.0	107.9	141.0	141.9	145.8	126.1
1975	76.2	74.8	90.6	119.0	121.1	122.0	118.7
1976	80.9	78.0	98.0	121.2	125.6	126.7	120.4
1977	86.7	84.6	101.5	117.1	119.9	122.0	111.2
1978	88.6	87.5	107.6	121.5	123.0	127.3	105.7
1979	79.0	77.5	101.1	128.0	130.5	131.6	125.9
1980	80.4	79.0	92.6	115.1	117.2	115.9	124.2
1981	82.4	79.7	82.3	99.8	103.2	102.7	105.7
1982	87.4	85.3	67.4	77.2	79.1	78.1	83.3
1983	85.0	86.1	78.8	92.7	91.5	88.6	103.7
1984	92.7	92.1	91.7	99.0	99.6	101.7	90.7
1985	94.2	94.8	97.2	103.2	102.5	103.5	98.2
1986	95.5	95.6	105.1	110.0	109.9	109.8	111.2
1987	100.0	100.0	100.0	100.0	101.0	100.0	100.0
1988	105.2	103.0	101.2	96.2	98.2	98.7	96.3
1989	98.3	98.6	99.0	100.6	100.4	100.9	98.1
1990	102.3	101.3	98.8	96.5	97.5	96.9	100.0
1991	97.4	95.4	86.2	88.5	90.4	88.6	98.1
1992	98.9	97.8	86.0	87.0	87.9	86.0	98.3
1993	102.3	102.3	91.4	89.4	89.4	86.8	100.0
1994	108.0	110.2	95.8	88.7	86.9	85.5	92.8
1995	111.3	111.5	99.7	89.5	89.4	88.6	92.7
Average annual percent change:							
1958-95	2.3	2.4	.1	-2.2	-2.2	-2.4	-1.4
1990-95	1.7	1.9	.2	-1.5	-1.7	-1.8	-1.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 84. Brick and structural clay tile (SIC 3251): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	86.9	87.2	126.6	145.8	145.2	152.3	115.7
1973	86.2	85.4	123.6	143.4	144.7	151.4	115.7
1974	88.2	87.4	123.3	139.7	141.0	147.0	115.7
1975	87.6	85.6	100.6	114.8	117.5	120.3	106.2
1976	97.5	92.4	112.6	115.5	121.8	123.7	112.4
1977	97.4	94.7	116.9	120.0	123.4	126.9	109.3
1978	94.2	92.3	120.0	127.4	130.1	135.9	106.2
1979	83.6	81.0	111.7	133.7	137.9	138.0	137.3
1980	83.5	80.5	97.9	117.3	121.6	117.3	140.6
1981	83.4	79.6	81.4	97.6	102.3	100.7	109.3
1982	87.9	85.1	64.1	72.9	75.3	73.9	81.2
1983	84.4	84.5	78.4	92.9	92.8	87.3	115.6
1984	91.4	83.8	91.4	100.0	101.8	103.7	93.7
1985	97.8	97.1	105.3	107.7	108.4	109.7	103.1
1986	95.5	95.5	109.9	115.1	115.1	114.9	115.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.8	104.9	99.3	93.9	94.6	94.8	93.8
1989	98.6	99.1	95.1	97.3	97.0	96.3	100.0
1990	99.1	99.0	92.4	93.2	93.4	92.5	96.9
1991	99.1	96.4	81.3	82.1	84.3	82.8	90.6
1992	100.4	97.7	83.6	83.3	85.5	82.8	96.9
1993	98.9	97.1	86.0	88.7	88.6	83.6	109.4
1994	103.7	104.7	89.6	86.4	85.5	82.1	100.0
1995	106.1	105.4	88.9	83.8	84.3	82.1	93.8
Average annual percent change:							
1958-95	1.8	1.8	-4	-2.1	-2.1	-2.4	-8
1990-95	1.4	1.3	-8	-2.1	-2.0	-2.4	-6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 85. Ceramic wall and floor tile (SIC 3253): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	59.6	60.8	53.0	89.0	87.3	88.4	83.4
1973	61.6	61.6	53.2	86.3	86.3	88.4	77.8
1974	58.2	58.2	56.3	98.8	98.8	95.2	100.0
1975	58.5	58.2	50.8	86.9	87.3	84.5	100.0
1976	57.9	57.9	53.1	91.6	91.6	91.0	94.6
1977	64.4	64.7	53.2	82.6	82.2	81.9	83.4
1978	74.8	76.9	61.5	82.2	80.0	81.9	72.2
1979	73.1	74.9	68.6	93.8	91.6	93.6	83.4
1980	79.3	81.2	74.4	93.8	91.6	93.6	83.4
1981	84.2	84.7	79.3	94.2	93.6	94.8	89.0
1982	86.4	86.4	68.2	78.9	78.9	79.2	77.8
1983	85.0	88.8	76.6	90.1	86.3	88.4	77.8
1984	97.2	99.6	89.0	91.6	89.4	92.2	77.8
1985	88.3	91.3	83.7	94.7	91.6	93.5	83.3
1986	94.8	95.8	95.8	102.1	101.0	101.3	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.9	99.7	102.8	99.0	103.2	105.2	94.4
1989	98.8	99.8	105.1	106.3	105.3	109.1	88.9
1990	107.8	107.8	111.2	103.2	103.2	103.9	100.0
1991	95.3	95.8	95.8	100.5	100.0	98.7	105.6
1992	98.4	99.2	93.0	95.5	93.7	94.8	88.9
1993	113.7	115.3	105.6	92.8	91.6	94.8	77.8
1994	113.7	121.0	109.6	98.4	90.5	92.2	83.3
1995	118.8	122.6	121.4	102.1	98.9	101.3	88.9
Average annual percent change:							
1958-95	3.4	3.5	2.6	-8	-9	-9	-8
1990-95	2.0	2.6	1.8	-2	-8	-5	-2.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 86. Clay refractories (SIC 3255): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	74.1	74.3	129.9	175.3	174.8	181.2	158.8
1973	80.1	81.4	141.0	176.1	173.3	189.5	129.4
1974	91.6	91.8	176.1	192.3	191.9	208.8	147.2
1975	81.2	78.4	152.8	188.2	185.0	204.4	170.7
1976	92.4	79.8	142.0	172.4	177.9	185.3	158.8
1977	84.7	86.0	151.9	179.2	176.5	187.4	147.2
1978	87.9	91.2	168.1	191.2	184.2	198.1	147.2
1979	93.9	87.9	166.1	176.9	189.0	206.6	141.3
1980	93.6	90.4	145.3	155.2	160.8	164.0	152.9
1981	95.2	94.7	145.3	153.6	154.5	164.0	129.4
1982	86.2	82.4	97.9	113.5	118.8	119.2	117.6
1983	103.3	103.0	110.9	107.4	107.7	108.6	106.0
1984	96.9	96.8	119.5	122.3	123.4	129.8	106.0
1985	94.9	94.6	104.9	110.6	110.9	112.8	106.0
1986	100.8	99.7	107.4	106.6	107.7	106.4	111.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.3	100.7	100.7	98.5	100.0	102.1	94.1
1989	98.5	100.0	107.8	109.5	107.8	110.6	100.0
1990	103.6	103.6	105.3	101.6	101.6	102.1	100.0
1991	97.9	97.8	94.8	96.8	95.9	95.7	100.0
1992	98.6	99.4	96.3	97.6	96.9	93.6	105.9
1993	95.0	97.6	79.3	83.5	81.3	80.9	82.4
1994	107.3	111.8	103.1	96.1	92.2	93.6	88.2
1995	98.0	98.2	99.8	103.9	101.6	102.1	100.0
Average annual percent change:							
1987-95	2.0	2.2	.5	-1.5	-1.7	-2.0	-8
1990-95	-1.5	-1.1	-1.1	.4	.0	0	0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 87. Concrete products (SIC 3271, 3272): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	90.5	88.7	90.7	100.2	102.2	107.8	87.9
1973	92.5	90.9	96.2	104.0	105.8	110.7	93.2
1974	93.7	90.8	86.6	92.4	95.4	100.6	82.8
1975	91.5	87.3	78.3	85.5	89.7	91.8	84.7
1976	94.3	91.6	79.7	84.6	87.1	90.0	80.2
1977	98.2	93.9	85.2	86.8	90.8	93.8	83.0
1978	98.5	92.1	87.4	90.5	94.8	98.1	86.3
1979	91.3	87.7	86.5	94.7	98.6	101.3	91.5
1980	89.2	85.5	78.0	87.4	91.2	91.3	91.5
1981	87.0	83.4	74.8	86.0	89.7	89.7	89.9
1982	89.4	84.9	68.3	76.4	80.4	80.8	79.4
1983	96.6	92.2	73.0	75.6	79.2	79.5	78.2
1984	98.3	94.4	78.5	79.8	83.1	82.8	83.8
1985	99.5	98.1	79.7	80.1	82.9	83.6	81.0
1986	104.4	101.6	87.0	83.3	85.6	86.8	82.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.1	101.5	104.1	102.0	102.5	101.8	104.7
1989	104.8	104.5	107.5	102.6	102.9	102.2	104.7
1990	103.8	103.3	103.0	99.2	99.7	98.2	103.8
1991	104.9	102.9	92.6	88.3	90.1	87.9	96.2
1992	103.2	102.4	90.1	87.3	88.0	85.7	94.5
1993	109.3	109.1	94.9	88.8	87.0	84.8	93.2
1994	108.6	109.4	98.8	91.9	91.2	89.1	97.0
1995	114.3	114.6	108.4	94.8	94.6	92.7	100.0
Average annual percent change:							
1987-95	2.5	2.4	3.7	1.2	1.2	.7	3.3
1990-95	1.9	2.1	1.0	-9	-1.0	-1.1	-7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 88. Ready-mixed concrete (SIC 3273): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	95.1	91.0	80.5	84.6	88.4
1973	99.1	93.3	83.2	83.9	89.1
1974	95.9	90.5	81.3	84.8	89.9
1975	93.3	85.8	73.6	78.9	85.8
1976	94.6	87.1	73.5	77.7	84.4
1977	95.6	92.1	83.5	87.3	90.7
1978	99.1	95.2	90.8	91.6	95.4
1979	96.2	91.2	92.2	95.8	101.1
1980	90.0	84.9	80.6	89.6	94.9
1981	92.5	87.2	77.2	83.5	88.5
1982	87.7	82.0	69.0	78.7	84.1
1983	90.7	86.9	75.1	82.8	86.5
1984	92.9	91.0	78.2	84.2	86.0
1985	93.6	91.0	78.5	83.9	86.3
1986	96.0	97.0	81.8	85.2	84.3
1987	100.0	100.0	100.0	100.0	100.0
1988	100.2	99.3	99.1	98.8	99.8
1989	101.0	99.6	97.4	96.4	97.7
1990	100.2	99.4	95.1	94.9	95.7
1991	98.7	94.6	84.9	87.8	89.8
1992	98.2	97.0	86.2	87.8	88.9
1993	96.9	96.9	88.5	91.4	91.3
1994	93.0	95.1	92.5	99.5	97.2
1995	95.8	97.3	96.9	101.1	99.5
Average annual percent change:					
1988-95	.7	.9	2.1	1.4	1.2
1990-95	-9	-4	-4	1.3	8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 89. Steel (SIC 331): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	59.6	55.7	118.0	198.0	211.9	223.2	176.8
1973	64.2	61.3	136.1	215.2	225.3	239.1	182.9
1974	67.8	64.0	145.5	215.2	227.2	240.3	186.8
1975	59.3	54.1	110.5	186.2	204.3	211.1	183.4
1976	61.7	57.1	117.0	189.7	204.8	212.3	181.5
1977	61.8	57.5	118.8	192.3	206.6	213.3	185.8
1978	65.1	61.8	129.2	198.6	208.9	217.8	181.4
1979	65.9	62.2	132.3	200.9	212.6	222.5	182.0
1980	65.4	59.4	113.3	173.3	190.8	195.1	177.4
1981	69.3	64.3	121.3	175.0	188.6	193.1	174.8
1982	60.6	53.6	79.1	130.5	147.7	144.9	158.2
1983	73.8	67.7	96.0	116.5	127.0	126.4	129.0
1984	81.3	76.5	95.2	117.1	124.5	126.6	118.0
1985	85.8	82.3	107.7	106.9	112.8	114.2	108.5
1986	89.7	85.2	107.8	97.9	101.9	102.9	98.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	113.5	113.9	118.2	104.2	103.8	106.2	96.2
1989	108.5	107.9	112.2	103.4	104.0	106.1	97.6
1990	110.5	109.8	113.0	102.3	102.9	104.5	98.2
1991	108.2	105.9	103.7	95.9	97.9	98.4	96.3
1992	117.7	116.8	109.0	92.6	93.3	93.1	93.9
1993	134.0	134.8	120.7	90.1	89.8	90.3	87.2
1994	144.6	147.5	131.5	90.9	89.2	89.8	87.2
1995	145.4	147.6	132.4	91.1	89.7	90.7	86.7
Average annual percent change:							
1947-95	2.9	3.2	1.0	-1.8	-2.1	-2.3	-7
1990-95	5.6	6.1	3.2	-2.3	-2.7	-2.8	-2.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the American Iron and Steel Institute; the Energy

Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics and the American Iron and Steel Institute.

**Table 90. Gray and ductile iron foundries (SIC 3321): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	96.8	97.3	146.6	166.9	167.9	173.8	140.1
1973	91.3	92.1	170.2	186.4	184.8	192.6	149.7
1974	94.1	93.0	171.3	182.0	184.1	191.4	150.5
1975	90.3	86.0	143.9	158.4	167.3	171.7	148.5
1976	89.4	87.3	144.1	161.1	165.1	168.7	148.5
1977	94.4	92.7	156.3	165.6	168.5	172.0	151.8
1978	98.9	94.7	171.3	176.8	181.0	185.1	161.4
1979	92.4	89.0	164.1	177.7	184.4	186.9	173.8
1980	86.3	81.0	129.7	149.2	156.9	157.0	166.4
1981	91.0	85.4	133.3	146.5	156.0	155.3	158.5
1982	87.9	78.0	92.1	104.8	118.1	115.2	131.8
1983	92.1	86.6	95.3	104.6	111.2	110.3	117.3
1984	99.1	98.7	115.4	116.5	119.4	119.5	119.4
1985	98.9	94.8	102.0	105.3	107.8	106.8	111.1
1986	99.3	96.7	95.3	95.9	98.5	97.1	104.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	108.0	109.9	114.4	105.9	104.1	104.9	100.7
1989	106.9	106.8	110.2	103.0	103.2	104.3	98.7
1990	107.9	108.9	108.0	98.2	99.1	99.4	98.0
1991	104.6	102.3	95.4	92.2	94.2	93.6	96.7
1992	107.7	108.7	100.6	93.5	92.6	92.6	92.8
1993	113.1	117.7	109.5	97.1	93.2	92.4	96.7
1994	115.5	123.3	120.6	104.4	97.8	98.6	94.1
1995	112.4	117.1	120.3	107.0	102.7	104.6	94.8
Average annual percent change:							
1954-95	1.7	1.9	.7	-9	-1.1	-1.2	-3
1980-95	.8	1.8	2.6	1.7	.7	1.0	.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 91. Steel foundries (SIC 3324, 3325): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	104.4	102.8	138.0	132.2	134.2	140.6	111.4
1973	105.8	106.5	149.5	141.4	140.4	148.8	112.4
1974	116.1	115.5	177.8	153.2	153.9	164.5	116.4
1975	111.5	111.6	168.4	151.1	150.9	159.1	121.5
1976	110.1	108.4	157.6	143.1	145.3	150.8	125.7
1977	104.3	104.1	157.6	151.1	151.4	156.2	134.0
1978	102.4	101.8	163.1	158.4	160.8	167.8	135.1
1979	104.5	105.2	187.2	179.2	178.0	188.6	140.2
1980	103.5	101.2	180.6	174.5	178.4	185.7	152.5
1981	95.0	92.6	149.4	157.2	161.3	165.4	147.4
1982	92.1	85.5	106.3	115.4	124.3	122.4	130.9
1983	93.1	89.5	84.1	90.3	94.0	90.4	106.2
1984	102.4	102.5	100.2	97.8	97.7	98.8	93.8
1985	99.5	100.2	95.8	96.3	95.6	95.2	96.9
1986	104.8	103.5	91.8	87.5	88.7	87.2	93.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	95.5	97.6	103.7	108.6	106.3	109.3	95.9
1989	96.3	97.4	110.9	115.1	113.9	117.0	103.1
1990	98.9	98.2	107.8	111.3	108.7	111.3	104.1
1991	94.8	96.9	104.1	109.8	107.4	107.8	106.2
1992	95.6	96.7	98.3	102.7	98.5	100.3	96.9
1993	101.5	104.8	99.2	97.7	94.7	98.4	88.7
1994	102.2	109.3	105.5	103.3	98.5	100.0	84.5
1995	106.2	109.0	114.0	107.3	104.6	109.0	89.7
Average annual percent change:							
1954-95	.8	1.0	.8	-3	-5	-5	-2
1980-95	1.8	2.1	1.1	-7	-9	-4	-2.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 92. Steel foundries, not elsewhere classified (SIC 3325): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	95.9	94.8	193.2	201.5	203.9	215.1	184.1
1973	96.6	97.6	209.2	216.6	214.3	226.8	175.1
1974	108.5	108.1	247.8	228.2	229.1	244.1	176.0
1975	102.9	103.6	247.5	246.8	238.8	251.3	194.0
1976	100.4	98.1	228.6	227.7	230.6	238.9	200.0
1977	98.1	98.0	229.7	230.0	239.3	246.8	212.1
1978	94.4	93.8	234.2	248.0	250.2	261.1	212.1
1979	96.0	96.4	259.8	270.7	269.4	286.8	256.0
1980	95.2	91.9	244.0	256.4	265.4	277.0	224.0
1981	85.9	82.9	195.2	227.2	235.4	243.0	206.0
1982	84.5	78.8	123.4	146.1	161.1	158.7	170.0
1983	86.2	81.5	90.4	104.9	110.9	126.1	128.0
1984	88.7	88.4	107.5	108.9	109.2	110.1	106.0
1985	96.3	94.8	94.4	98.0	99.6	99.4	100.0
1986	99.3	96.9	83.3	83.9	86.0	85.5	88.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.2	104.5	116.1	112.8	105.2	112.3	98.0
1989	103.1	104.5	126.2	124.3	122.7	126.3	110.0
1990	102.3	103.8	123.3	120.5	118.8	122.3	106.0
1991	104.7	104.1	119.6	116.4	114.8	118.8	108.0
1992	104.2	107.7	104.4	100.2	96.9	98.3	92.0
1993	109.5	113.2	112.2	102.4	99.1	101.7	90.0
1994	106.5	116.0	121.1	113.7	104.4	107.8	92.0
1995	112.0	115.5	129.6	115.7	112.2	117.9	92.0
Average annual percent change:							
1972-95	.7	.9	-1.7	-2.4	-2.6	-2.6	-2.5
1980-95	1.8	2.2	1.0	-8	-1.1	-7	-2.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 93. Primary copper (SIC 3331): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	31.5	31.4	163.7	519.1	522.1	553.3	399.8
1973	32.8	33.0	170.4	519.1	515.7	542.0	413.8
1974	29.5	29.2	155.1	526.5	531.1	537.9	499.3
1975	30.1	29.9	140.4	467.0	470.0	484.4	485.4
1976	34.5	34.4	149.4	432.8	433.9	434.0	428.4
1977	36.3	35.4	140.7	388.1	397.2	407.0	357.0
1978	36.0	35.9	141.6	392.8	394.0	407.0	342.7
1979	41.1	40.9	147.6	359.1	360.8	376.4	299.8
1980	38.1	35.9	112.2	294.2	312.2	311.1	314.1
1981	45.0	44.9	145.7	323.5	324.7	326.5	314.1
1982	46.6	47.0	106.3	232.6	230.4	226.8	242.7
1983	49.6	50.3	107.3	206.3	203.2	203.6	200.0
1984	57.6	59.1	107.4	196.3	181.8	176.9	200.0
1985	73.8	74.2	103.4	140.2	138.4	130.8	171.4
1986	86.7	86.7	102.5	115.8	118.2	118.0	114.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.8	103.8	113.2	108.0	109.1	107.7	114.3
1989	94.7	102.0	120.8	127.4	118.2	119.2	114.3
1990	84.9	88.6	126.2	148.6	142.4	142.3	142.9
1991	82.5	88.8	123.8	150.1	139.4	136.5	142.9
1992	71.9	77.8	135.1	183.2	189.7	161.5	200.0
1993	86.9	86.8	155.1	178.4	172.7	166.4	200.0
1994	74.0	75.8	146.7	198.3	193.9	192.3	200.0
1995	77.3	80.1	157.5	204.2	197.0	192.3	214.3
Average annual percent change:							
1947-95	3.1	2.9	1.2	-1.9	-1.7	-2.0	-1.1
1980-95	-1.9	-2.0	4.8	6.8	6.7	6.2	6.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 94. Primary aluminum (SIC 3334): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	73.7	71.7	105.9	143.7	147.8	144.9	160.0
1973	73.6	73.0	117.7	159.9	161.2	163.0	154.4
1974	82.3	80.5	128.8	156.5	160.0	162.2	151.6
1975	71.7	70.5	103.0	143.7	146.1	139.8	171.5
1976	75.8	75.2	114.1	150.6	151.8	150.7	157.3
1977	75.0	74.5	123.2	164.3	165.3	165.2	165.9
1978	74.7	75.9	130.4	174.8	171.7	172.5	168.8
1979	74.7	74.9	136.3	162.5	162.0	162.5	160.1
1980	74.9	73.4	139.2	185.8	189.7	186.2	203.1
1981	77.8	76.7	134.3	172.6	175.1	168.8	200.2
1982	80.1	74.9	97.9	122.2	130.8	136.3	117.2
1983	91.6	86.6	100.3	109.5	115.8	122.9	98.4
1984	100.7	97.9	122.6	121.8	125.3	136.3	98.4
1985	97.6	93.7	104.7	107.3	111.8	118.5	95.3
1986	102.7	96.9	90.9	98.5	91.9	88.5	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.3	101.5	118.0	115.3	116.3	123.6	98.4
1989	104.8	102.9	120.6	115.1	117.2	126.8	93.8
1990	106.5	104.5	121.1	113.7	115.8	124.2	95.3
1991	110.6	109.0	123.3	111.5	113.1	126.8	79.7
1992	109.7	107.7	120.9	110.2	112.2	126.1	78.1
1993	105.7	101.8	110.5	104.6	108.6	119.7	81.3
1994	99.0	96.1	98.7	98.7	102.7	113.4	76.6
1995	102.2	99.2	100.9	98.8	101.8	112.7	75.0
Average annual percent change:							
1987-95	2.7	2.5	3.9	1.2	1.4	1.6	1.1
1990-95	-8	-1.0	-3.6	-2.8	-2.5	-1.9	-4.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the

Interior; and the Bureau of the Census, Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 95. Copper rolling and drawing (SIC 3351): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	73.3	73.7	123.2	168.0	167.1	169.9	158.1
1973	77.5	78.2	138.0	178.1	178.5	180.7	161.9
1974	71.2	70.6	118.0	165.6	167.1	167.5	166.0
1975	82.1	58.6	83.4	134.3	142.4	136.4	164.1
1976	71.3	70.8	106.8	149.7	150.8	150.5	152.1
1977	82.9	82.9	114.8	138.5	138.8	137.5	142.0
1978	83.4	82.8	121.9	146.3	147.3	147.2	148.0
1979	82.0	80.5	127.5	155.5	158.4	159.7	154.1
1980	73.2	71.8	98.2	134.2	137.2	134.1	148.0
1981	75.1	72.3	99.8	133.0	138.1	135.2	148.0
1982	70.4	66.3	75.2	106.7	113.4	107.2	135.3
1983	79.8	79.5	87.7	108.9	110.4	103.9	133.3
1984	84.7	85.8	99.2	117.2	116.0	111.1	133.3
1985	86.2	83.9	87.9	102.0	104.8	102.2	113.7
1986	82.3	80.4	80.4	98.0	100.0	99.4	102.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	93.0	93.3	95.3	102.8	102.2	100.6	107.8
1989	89.1	89.8	80.0	104.3	103.5	101.7	109.8
1990	90.7	89.8	90.2	99.4	100.4	98.3	107.8
1991	86.4	84.0	83.2	98.4	99.1	98.7	107.8
1992	83.0	82.5	80.0	98.3	97.0	94.4	105.9
1993	89.2	89.7	86.2	98.7	98.1	93.9	103.9
1994	86.6	89.5	88.6	102.1	99.1	98.3	102.0
1995	86.6	89.0	86.5	99.8	97.4	96.7	100.0
Average annual percent change:							
1988-95	2.0	2.2	.5	-1.8	-1.8	-1.7	-1.4
1990-95	1.3	2.0	1.4	.1	-6	-3	-1.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Copper Development Association Inc., the Bureau

**Table 96. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	71.4	70.9	78.0	109.2	110.0	114.3	96.6
1973	79.0	78.9	93.2	118.0	118.1	124.1	99.3
1974	81.0	78.4	86.8	109.6	113.3	118.8	96.6
1975	73.5	68.3	62.5	85.0	91.5	91.2	92.3
1976	85.4	82.8	84.0	98.3	101.4	105.4	89.2
1977	84.0	82.6	89.4	106.4	106.3	113.6	92.3
1978	87.3	84.6	96.8	113.1	116.7	122.0	99.3
1979	84.3	82.6	97.2	115.3	117.7	121.8	103.6
1980	84.0	81.0	91.7	109.2	113.2	114.8	108.0
1981	81.3	78.6	86.3	106.1	109.7	110.8	106.7
1982	83.3	78.3	75.6	90.7	96.5	96.2	97.8
1983	94.2	91.0	88.8	94.3	97.6	99.2	92.2
1984	82.3	80.2	89.1	96.5	96.7	101.5	89.9
1985	85.7	84.8	85.2	99.4	100.5	102.4	94.2
1986	95.8	93.4	92.1	96.1	98.6	99.0	96.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	96.3	98.1	97.1	100.8	99.0	98.2	101.4
1989	90.6	91.9	95.0	104.8	104.5	103.2	108.7
1990	91.2	92.8	92.0	100.9	99.1	98.9	100.0
1991	90.3	92.5	89.8	99.4	97.1	95.9	100.7
1992	96.5	100.1	89.3	92.6	89.3	89.1	89.9
1993	93.9	98.3	87.9	93.7	91.3	91.6	90.6
1994	99.6	103.8	94.5	94.2	91.0	92.9	84.8
1995	93.9	97.7	90.5	96.4	92.7	95.2	84.8
Average annual percent change:							
1987-95	3.0	3.1	3.4	.5	.4	.4	.3
1990-95	.6	1.0	-3	-9	-13	-8	-3.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 97. Metal cans (SIC 3411): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	58.8	58.3	101.4	173.0	173.9	179.5	146.4
1973	59.2	59.6	105.6	178.3	177.1	184.1	143.3
1974	61.5	61.2	107.3	174.5	175.4	179.5	155.2
1975	63.1	62.7	99.8	158.1	159.2	159.8	156.7
1976	67.8	67.1	104.0	153.1	155.1	156.8	147.9
1977	71.7	71.5	108.7	151.6	151.9	153.7	143.3
1978	74.2	73.0	109.2	147.1	149.6	151.2	141.9
1979	75.2	74.8	109.4	145.5	146.3	147.4	140.3
1980	74.5	74.0	100.8	135.3	136.1	135.7	137.3
1981	78.4	77.2	98.5	125.6	127.7	126.3	134.4
1982	89.4	87.4	101.5	113.5	116.1	114.9	123.7
1983	95.9	93.0	100.5	104.8	108.1	107.2	113.6
1984	101.1	98.7	103.5	102.4	104.9	104.4	108.5
1985	99.2	98.5	103.3	104.1	104.9	105.2	103.4
1986	95.3	95.4	96.2	103.5	104.0	104.9	96.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.9	108.7	103.2	98.5	94.9	94.6	96.6
1989	108.1	108.8	101.5	93.9	93.3	93.6	91.5
1990	117.5	117.8	106.7	90.8	90.6	90.7	89.8
1991	123.8	123.3	108.8	86.3	86.8	87.1	83.1
1992	129.7	128.2	103.0	79.4	80.3	80.9	76.3
1993	134.6	133.8	101.6	75.8	76.1	76.5	72.9
1994	140.7	138.8	106.0	75.4	75.8	75.5	78.0
1995	146.3	141.9	105.1	71.8	74.0	74.0	74.6
Average annual percent change:							
1987-95	3.2	3.2	2.2	-1.0	-1.0	-1.1	-1.4
1990-95	4.5	3.8	-3	-4.6	-4.0	-4.0	-3.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Can Manufacturing Association, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 98. Hand and edge tools, not elsewhere classified (SIC 3423): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	108.2	107.4	100.9	93.2	93.7	98.3	77.3
1973	108.6	103.3	100.1	100.5	100.8	106.4	83.9
1974	103.9	102.6	102.9	98.8	100.3	106.3	81.0
1975	100.0	98.5	99.4	99.4	90.7	95.2	77.3
1976	103.8	101.8	100.1	98.8	98.5	103.1	83.9
1977	106.3	105.0	117.8	110.8	112.2	117.9	95.2
1978	107.4	106.4	127.5	118.7	119.9	128.2	95.2
1979	111.6	109.0	132.9	119.1	122.0	127.4	105.6
1980	106.3	101.0	113.6	106.9	112.5	115.2	104.7
1981	103.0	101.0	113.9	112.8	112.8	116.3	102.8
1982	101.0	95.4	91.9	91.0	95.4	95.2	100.0
1983	96.5	92.2	88.1	91.3	95.6	94.7	96.1
1984	97.9	96.0	93.5	96.5	97.4	97.4	97.2
1985	98.8	94.6	91.7	92.8	95.9	98.1	93.4
1986	97.1	98.2	92.5	95.3	95.2	95.5	95.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.5	100.8	101.0	100.5	100.2	100.3	100.0
1989	101.0	102.3	100.8	98.8	98.6	97.8	100.9
1990	95.0	95.7	92.9	97.8	97.1	95.5	101.9
1991	93.1	93.7	89.0	95.8	95.0	92.7	101.9
1992	93.1	93.9	89.0	95.6	94.7	93.6	98.1
1993	93.3	95.5	92.8	99.5	97.1	99.7	89.6
1994	100.8	102.0	99.6	98.8	97.6	101.0	87.7
1995	98.4	100.9	101.1	102.8	100.2	101.6	96.2
Average annual percent change:							
1972-95	.6	.7	1.6	1.0	.9	.8	1.1
1980-95	.7	1.1	1.7	1.0	.6	1.2	-1.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 99. Heating equipment, except electric (SIC 3433): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	78.1	77.0	118.1	148.6	150.8	185.4	123.8
1973	78.0	78.7	122.9	157.5	156.1	173.0	125.0
1974	72.7	72.0	108.9	147.0	148.4	161.7	123.8
1975	73.9	71.0	87.7	132.1	137.6	148.8	120.8
1976	77.8	77.2	90.4	116.2	117.1	124.9	102.7
1977	90.1	87.8	110.5	122.7	125.9	140.6	98.5
1978	90.7	88.6	124.0	136.7	140.0	156.4	109.8
1979	86.2	85.2	128.1	148.6	150.4	165.4	122.1
1980	88.1	85.2	134.7	152.9	158.1	172.2	131.9
1981	83.8	79.8	104.8	125.1	131.3	134.6	125.0
1982	90.4	86.1	109.3	126.8	126.9	128.5	123.8
1983	82.7	80.5	101.8	123.1	126.4	130.1	119.4
1984	91.8	90.0	105.4	115.0	117.1	120.3	111.1
1985	91.9	91.7	107.4	116.8	117.1	122.5	106.6
1986	95.2	95.5	104.5	108.8	109.4	114.3	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	113.7	114.1	107.1	94.2	93.8	95.5	90.4
1989	106.0	105.9	99.3	94.8	93.8	94.2	93.2
1990	114.0	112.8	98.4	86.3	87.2	85.7	90.4
1991	118.4	117.1	87.0	81.3	82.8	78.6	91.8
1992	121.2	116.3	86.3	82.0	83.3	79.2	91.8
1993	121.8	122.5	102.5	94.2	83.7	80.5	90.4
1994	130.2	133.8	118.5	91.0	88.5	86.4	93.2
1995	131.1	132.8	115.6	88.9	85.9	85.1	87.7
Average annual percent change:							
1972-95	2.3	2.4	-1	-0.3	-0.4	-2.8	-1.5
1980-95	2.8	3.3	3.0	-1	-0.3	-1	-0.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 100. Fabricated structural metal (SIC 3441): Indexes of output per hour and related measures, 1972-85
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	95.3	95.5	126.5	126.5	126.5	132.9	118.6
1973	97.1	95.5	124.3	126.0	130.2	134.7	119.1
1974	91.1	90.5	115.8	127.1	126.0	133.3	114.6
1975	92.0	90.4	102.7	125.3	127.8	132.9	115.2
1976	92.4	90.8	96.8	117.2	119.6	123.2	109.5
1977	93.5	92.1	100.8	120.7	122.8	125.8	114.6
1978	94.2	92.6	102.7	122.0	124.3	129.1	112.2
1979	95.8	94.2	113.6	132.4	134.8	141.0	119.1
1980	96.0	94.8	123.5	142.6	145.7	153.4	126.4
1981	94.3	93.2	118.9	141.1	142.9	150.9	122.5
1982	94.5	94.0	107.5	127.2	128.0	130.5	121.7
1983	97.0	96.2	100.0	114.9	115.9	116.2	115.2
1984	91.2	95.9	102.3	112.1	113.8	116.6	106.8
1985	99.0	96.2	107.8	108.9	112.0	115.8	102.6
1986	99.0	98.0	102.5	103.6	104.6	106.0	100.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.4	101.8	101.0	100.5	100.1	101.5	96.8
1989	97.6	96.0	100.2	102.6	102.2	103.3	99.5
1990	101.2	101.7	106.2	104.0	103.4	104.2	101.4
1991	104.5	103.8	101.3	95.9	97.8	97.8	97.7
1992	103.6	102.9	93.1	89.9	90.5	91.0	89.1
1993	108.1	109.0	95.9	88.8	88.0	88.1	87.8
1994	106.8	111.8	100.3	91.3	89.7	91.0	86.4
1995	110.1	112.6	107.3	97.4	95.3	97.6	89.6
Average annual percent change:							
1987-95	1.2	1.3	.9	-4	-5	-5	-3
1980-95	1.7	2.1	.4	-1.3	-1.6	-1.3	-2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 101. Metal doors, sash, and trim (SIC 3442): Indexes of output per hour and related measures, 1972-85
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	91.1	89.1	84.2	90.4	94.5	97.1	88.0
1973	90.5	88.2	82.3	90.9	93.3	95.1	88.0
1974	96.6	94.0	74.9	96.5	99.2	92.2	91.1
1975	98.3	94.2	90.6	98.6	72.0	73.4	67.6
1976	92.0	89.7	87.8	73.5	75.4	78.4	67.8
1977	97.6	94.5	83.2	85.2	88.0	91.8	78.1
1978	93.0	90.0	86.1	92.0	95.6	98.3	88.0
1979	92.6	89.8	87.8	94.9	98.0	100.0	93.0
1980	90.5	87.1	82.0	90.6	94.2	96.0	89.5
1981	90.4	88.8	85.2	94.3	96.0	97.1	93.5
1982	95.3	92.1	81.7	85.7	88.7	87.2	71.0
1983	98.4	93.8	85.2	89.7	94.3	95.2	94.0
1984	101.4	98.0	89.9	88.7	91.7	91.5	91.5
1985	104.8	102.3	97.5	90.0	95.3	94.9	96.6
1986	102.0	102.2	100.3	98.4	98.2	98.9	102.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.8	104.0	99.0	94.7	95.3	93.4	103.5
1989	105.8	105.0	100.8	95.2	95.9	94.5	100.0
1990	100.1	101.7	95.4	90.5	93.8	91.4	100.5
1991	103.0	101.7	98.8	90.0	87.2	82.4	96.1
1992	108.7	107.0	92.5	88.7	88.4	83.7	94.2
1993	106.5	106.4	93.5	88.6	88.7	88.7	94.2
1994	103.3	105.1	98.0	94.8	93.3	92.8	94.7
1995	95.8	97.9	90.4	95.5	94.4	94.6	93.7
Average annual percent change:							
1987-95	.6	.7	1.0	4	4	3	.6
1980-95	-1.3	-1.8	-1.6	-6	-1	-7	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 102. Fabricated plate work (SIC 3443): Indexes of output per hour and related measures, 1982-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1982	87.7	84.3	120.8	137.7	143.3	132.5	162.4
1983	91.5	88.9	102.6	112.2	115.4	104.0	135.5
1984	88.3	87.5	97.5	110.5	111.5	102.6	127.2
1985	87.5	86.7	97.6	111.5	112.5	109.6	117.7
1986	86.4	85.1	88.4	102.4	103.9	101.8	106.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.2	97.1	110.4	114.7	113.7	119.5	103.7
1989	90.3	91.1	108.3	119.9	118.8	125.9	106.4
1990	94.1	94.6	112.0	119.1	118.4	124.7	107.3
1991	94.3	94.8	110.7	117.4	116.7	122.6	106.4
1992	98.3	99.0	109.2	111.1	110.3	116.3	99.7
1993	98.3	98.9	107.7	106.6	106.9	116.3	95.7
1994	109.3	111.1	121.1	110.7	109.0	119.3	90.8
1995	109.4	112.1	126.6	115.7	113.0	126.8	88.7
Average annual percent change:							
1982-95	1.7	2.2	.4	-1.3	-1.8	-3	-4.5
1990-95	3.1	3.5	2.5	-6	-9	3	-3.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 103. Bolts, nuts, rivets, and washers (SIC 3452): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	74.2	72.9	84.5	113.9	115.8	122.7	96.5
1973	75.8	72.1	95.8	126.4	124.3	122.8	103.0
1974	78.3	78.2	96.9	127.0	127.1	136.2	104.5
1975	71.7	66.2	70.9	98.8	107.1	109.8	100.1
1976	78.6	73.8	81.2	105.9	109.9	113.2	101.5
1977	79.1	77.4	89.1	112.7	115.2	120.9	102.3
1978	80.8	79.8	97.6	120.9	122.6	128.4	108.4
1979	78.9	77.4	102.2	129.2	132.1	138.2	116.6
1980	78.6	75.1	93.9	119.2	125.0	129.7	115.8
1981	81.3	77.1	94.2	115.9	122.2	125.1	115.0
1982	75.3	68.4	71.0	94.3	103.8	103.6	104.5
1983	83.6	80.0	79.0	94.5	98.8	97.6	90.5
1984	85.3	84.5	91.0	106.7	107.7	108.4	106.0
1985	86.8	86.9	93.4	105.2	107.5	108.4	105.3
1986	91.0	90.7	92.8	101.8	102.1	102.1	102.3
1987	100.7	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.0	97.7	105.0	108.3	107.5	106.9	109.0
1989	93.8	93.3	102.7	109.5	110.0	109.9	110.5
1990	93.7	92.5	98.2	104.9	106.2	107.5	103.5
1991	98.1	92.7	93.7	97.5	101.1	101.2	100.8
1992	91.9	89.2	86.3	81.8	97.9	97.6	98.5
1993	92.8	90.5	88.5	95.4	97.9	98.5	96.2
1994	95.8	95.1	95.5	99.7	100.4	104.2	91.0
1995	100.5	100.4	103.2	102.7	102.6	108.1	99.5
Average annual percent change:							
1988-95	1.0	1.2	1.4	-4	-2	-2	-1
1990-95	1.4	1.7	1.0	-4	-6	-1	-2.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 104. Metal stampings (SIC 3465, 3466, 3469): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	84.4	83.3	84.1	98.7	101.0	103.2	90.9
1973	83.8	83.7	82.5	110.4	108.6	114.1	94.9
1974	82.5	79.3	82.8	100.4	104.4	106.6	94.2
1975	80.8	75.9	68.0	84.3	89.8	90.0	87.0
1976	84.2	82.3	82.8	98.3	100.6	102.9	90.9
1977	86.6	85.5	94.1	108.6	110.1	112.8	97.9
1978	88.0	85.4	96.7	100.9	113.2	116.9	97.0
1979	87.7	83.2	92.7	105.8	111.5	115.1	95.8
1980	84.2	77.9	78.1	92.8	100.3	101.7	93.8
1981	85.4	80.8	78.3	91.6	97.1	98.5	91.2
1982	83.4	78.8	70.4	84.4	89.3	87.3	87.0
1983	91.0	89.8	83.9	92.2	93.4	92.9	95.0
1984	95.3	95.3	98.9	102.7	103.7	104.7	99.8
1985	91.9	91.9	96.8	105.4	105.3	105.9	102.5
1986	95.8	95.5	95.5	99.7	100.0	100.3	99.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.5	102.3	101.6	101.1	99.4	99.6	98.4
1989	98.5	97.2	99.5	101.1	102.4	101.6	105.8
1990	93.0	91.9	89.9	95.7	97.9	96.7	102.5
1991	92.8	92.0	84.3	91.0	91.6	90.3	96.8
1992	106.6	107.2	98.1	92.1	91.6	90.8	94.5
1993	113.1	115.9	106.5	96.0	93.7	94.1	91.9
1994	117.6	121.5	118.7	101.0	97.7	98.9	92.6
1995	120.4	123.4	125.6	104.3	101.8	103.3	95.8
Average annual percent change							
1983-95	1.5	1.5	2.2	.7	.7	.8	.8
1980-95	5.3	6.1	6.9	1.5	8	1.3	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 105. Automotive stampings (SIC 3465): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	75.9	75.0	77.1	101.7	102.8	103.2	102.0
1973	74.8	74.9	84.7	113.0	113.0	114.3	107.0
1974	75.0	70.8	71.8	95.7	101.4	102.3	98.5
1975	74.5	68.4	61.3	82.5	89.6	90.1	87.4
1976	76.3	74.1	76.1	99.7	102.6	104.3	95.5
1977	79.2	78.6	86.6	109.4	110.3	112.8	100.0
1978	80.8	77.5	88.3	109.6	114.0	116.7	101.0
1979	81.4	79.6	79.0	97.1	104.5	106.6	95.0
1980	80.0	71.5	80.1	75.1	84.1	84.0	85.9
1981	82.8	75.4	59.8	72.2	79.2	79.3	79.9
1982	83.9	77.7	58.8	69.9	75.5	74.8	80.4
1983	96.2	95.9	77.3	80.3	80.8	81.2	77.9
1984	100.5	101.1	94.7	94.2	93.7	95.3	96.4
1985	94.5	98.6	95.2	100.7	99.5	100.7	93.5
1986	95.7	97.1	96.5	100.8	99.4	100.0	96.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.8	104.0	102.1	99.3	98.2	98.9	95.0
1989	101.8	100.3	99.3	97.5	99.0	98.4	102.0
1990	96.1	94.1	88.2	91.8	93.7	92.8	98.5
1991	97.3	95.2	80.6	82.9	84.7	84.0	88.4
1992	113.8	112.8	99.0	87.0	87.8	87.2	91.0
1993	120.8	122.9	111.5	90.3	90.7	91.9	94.9
1994	124.9	129.4	123.8	99.0	98.5	98.8	94.0
1995	128.4	129.5	129.1	100.5	99.7	100.1	97.5
Average annual percent change							
1973-95	2.3	2.4	2.3	-1	-1	-1	-2
1980-95	6.0	6.5	7.9	1.8	1.2	1.5	-1.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 106. Metal stampings, not elsewhere classified (SIC 3469): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	96.9	96.0	92.4	95.4	96.2	101.4	80.0
1973	96.8	97.1	103.4	106.8	106.5	113.9	83.0
1974	95.9	94.9	130.5	104.8	105.9	111.1	89.3
1975	89.3	86.6	75.5	84.6	87.2	87.8	85.2
1976	95.2	94.1	90.5	95.0	96.2	99.4	86.1
1977	97.3	96.2	104.0	106.9	108.1	112.1	95.1
1978	98.4	97.5	108.5	110.3	111.3	116.9	92.4
1979	100.2	97.9	117.4	117.1	119.9	127.2	95.9
1980	96.9	93.9	111.9	115.5	119.1	125.1	99.7
1981	96.9	95.2	112.4	116.0	118.1	123.6	100.4
1982	87.1	84.9	89.4	102.6	105.2	103.3	111.2
1983	87.7	87.0	93.8	107.0	107.8	107.4	109.0
1984	94.3	92.5	107.2	113.7	115.8	117.1	111.2
1985	88.6	88.6	99.4	112.1	112.2	112.9	109.9
1986	93.9	92.1	92.3	98.3	100.3	100.2	101.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.0	100.6	102.8	105.0	102.2	101.9	103.1
1989	95.3	94.7	102.5	107.5	108.3	107.5	110.8
1990	90.4	90.6	94.8	104.9	104.6	103.7	107.6
1991	89.5	90.9	92.5	103.3	101.7	100.4	105.8
1992	98.8	101.7	98.7	99.8	97.1	96.6	98.7
1993	104.8	108.3	106.9	102.0	98.6	98.5	99.1
1994	109.3	112.8	115.2	105.4	102.1	104.9	92.8
1995	112.8	118.0	125.6	111.4	106.5	109.8	95.5
Average annual percent change:							
1972-95	.7	.9	1.3	.7	.4	.3	.8
1980-95	4.5	5.4	5.8	1.2	.4	1.1	-2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 107. Valves and pipe fittings (SIC 3491, 3492, 3494): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	90.8	91.0	86.7	95.5	95.3	99.9	85.5
1973	93.6	95.2	97.4	104.0	102.3	107.8	91.9
1974	85.9	91.0	98.9	115.1	108.7	114.9	96.8
1975	84.0	83.7	86.7	103.2	103.5	106.2	98.2
1976	82.9	83.2	86.3	104.1	103.8	107.3	96.8
1977	90.7	90.1	98.9	109.1	109.8	115.7	98.6
1978	91.9	91.2	104.2	113.3	114.2	121.2	100.8
1979	95.7	95.3	112.9	118.0	118.5	124.4	107.0
1980	93.5	93.1	110.3	117.9	118.5	122.8	110.6
1981	95.7	95.4	114.2	119.3	119.7	122.6	114.4
1982	92.1	89.7	104.4	113.4	116.4	114.5	120.2
1983	94.2	92.1	93.9	99.7	102.0	100.1	105.8
1984	95.0	94.6	102.1	107.5	107.9	108.6	107.0
1985	94.4	93.4	98.7	104.5	105.6	105.5	106.0
1986	93.9	93.5	93.6	99.7	100.2	99.2	102.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	101.4	103.7	109.3	107.8	105.4	107.3	101.5
1989	101.2	101.9	106.4	105.1	104.3	105.3	102.4
1990	102.1	103.2	108.2	106.0	104.9	106.1	102.4
1991	101.7	102.2	103.7	101.9	101.4	101.7	100.9
1992	100.4	103.1	100.2	99.8	97.3	97.3	97.3
1993	104.2	105.5	102.9	98.8	97.6	99.1	94.6
1994	109.7	114.1	112.2	102.3	98.4	101.5	92.2
1995	109.7	113.1	116.5	106.1	102.9	106.7	95.5
Average annual percent change:							
1984-95	1.4	1.4	2.1	.7	.7	.4	1.6
1980-95	1.4	1.8	1.5	.0	-.4	.1	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 108. Fabricated pipe and fittings (SIC 3498): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	135.8	133.0	116.2	85.6	87.4	88.1	85.9
1973	140.8	137.9	133.6	94.9	96.9	97.3	95.9
1974	142.0	141.2	147.4	103.8	104.4	105.4	102.0
1975	132.1	129.4	133.8	101.3	103.4	104.1	102.0
1976	123.3	120.1	152.9	124.0	127.3	132.1	113.9
1977	126.3	121.0	170.3	134.8	140.8	142.7	135.9
1978	128.3	123.0	185.5	144.6	150.8	154.8	139.9
1979	116.0	113.0	185.8	160.2	164.4	172.7	139.9
1980	116.8	112.7	180.2	154.3	159.8	162.7	152.0
1981	122.2	118.3	189.0	154.6	159.8	163.5	150.0
1982	118.2	115.5	188.8	159.7	163.4	158.7	177.9
1983	115.1	112.5	164.7	143.0	146.4	144.8	152.0
1984	130.3	125.7	159.7	122.8	126.0	126.0	126.0
1985	120.0	113.8	142.9	119.0	125.5	123.3	132.0
1986	121.4	116.9	122.0	100.5	104.4	100.6	116.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	99.6	103.9	111.2	111.6	107.0	108.0	104.0
1989	102.3	103.4	109.1	106.6	105.5	104.0	110.0
1990	107.0	109.3	120.3	119.5	110.0	107.3	112.0
1991	114.2	114.9	118.3	103.6	103.0	100.0	112.0
1992	109.6	114.3	141.8	129.3	124.0	118.7	140.0
1993	113.3	118.0	151.1	133.4	128.0	125.3	136.0
1994	112.9	118.4	159.2	141.0	134.5	132.0	142.0
1995	113.0	117.2	172.3	152.5	147.0	145.3	152.0
Average annual percent change:							
1987-95	.2	.3	2.1	1.9	1.8	1.8	1.7
1990-95	1.1	1.4	7.4	6.3	6.0	6.3	5.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 109. Internal combustion engines, not elsewhere classified (SIC 3519): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	79.1	79.9	87.2	110.2	109.2	115.9	93.1
1973	83.1	85.5	101.3	121.8	118.5	126.8	98.9
1974	86.3	88.9	112.4	130.3	126.4	134.7	106.3
1975	80.6	78.6	95.1	118.0	121.0	124.2	113.6
1976	85.3	84.6	105.6	123.7	124.8	129.3	113.6
1977	89.5	89.5	124.3	138.9	138.8	145.2	123.6
1978	93.7	94.1	141.0	150.5	149.9	155.6	136.2
1979	86.4	84.8	134.1	155.1	158.1	164.8	141.6
1980	85.4	84.8	118.6	138.9	139.8	141.0	136.8
1981	84.9	85.0	118.3	139.3	136.2	140.5	136.2
1982	73.6	69.0	85.9	116.7	124.4	116.4	143.1
1983	77.6	73.5	81.0	104.4	110.3	101.7	130.5
1984	90.2	89.6	109.4	121.2	122.1	122.6	121.0
1985	92.0	89.6	101.1	109.9	112.9	111.5	116.3
1986	98.5	96.3	93.6	100.1	102.4	99.8	108.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.3	107.0	112.7	106.0	105.3	107.6	100.5
1989	113.2	110.8	112.3	99.2	101.4	102.3	99.5
1990	108.4	104.4	102.6	94.7	98.3	98.6	97.6
1991	103.3	99.6	92.6	89.7	93.0	90.1	99.0
1992	101.2	100.0	91.1	90.0	91.1	87.2	99.5
1993	104.3	104.8	96.4	92.4	91.9	87.4	101.4
1994	119.5	121.8	116.2	97.2	95.3	92.4	101.4
1995	124.9	127.4	122.7	98.2	96.3	92.9	103.4
Average annual percent change:							
1987-95	2.1	2.1	2.0	-1	-1	-5	7
1990-95	2.9	4.1	3.6	.7	.4	-1.2	1.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 110. Farm and garden machinery (SIC 352): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	88.4	82.2	140.7	157.4	152.6	163.0	127.8
1973	92.7	95.2	168.1	181.3	176.7	190.7	141.7
1974	94.6	98.5	189.4	200.3	192.4	209.7	150.2
1975	94.2	97.3	177.4	188.3	182.4	192.1	158.6
1976	98.7	97.6	173.8	179.8	178.1	185.5	159.9
1977	97.8	97.8	179.9	183.9	184.0	190.3	168.8
1978	98.4	98.4	168.2	174.4	174.4	181.5	156.5
1979	98.2	99.6	200.6	204.2	201.4	211.0	178.1
1980	91.3	90.5	169.7	185.9	187.5	188.6	184.7
1981	93.4	91.4	159.6	171.0	174.6	173.0	178.9
1982	90.6	88.5	123.0	135.7	138.9	129.4	162.3
1983	88.6	86.9	107.0	120.8	123.1	115.7	141.2
1984	98.5	98.2	118.1	119.9	120.3	119.3	123.1
1985	92.7	92.6	101.2	109.1	109.2	106.7	115.1
1986	93.3	93.8	90.1	96.6	96.0	93.9	100.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.3	107.3	117.2	110.2	109.2	114.7	97.7
1989	110.7	110.6	121.2	109.5	109.6	117.4	93.4
1990	118.6	115.9	130.7	112.2	112.8	122.8	96.7
1991	113.0	110.4	115.7	102.4	104.8	112.5	88.9
1992	114.1	111.1	110.8	97.1	99.7	105.5	87.5
1993	118.6	115.8	125.9	106.0	105.1	112.8	89.2
1994	125.2	128.4	142.5	113.9	111.0	121.7	88.9
1995	135.9	135.5	145.3	106.9	107.3	116.6	87.9
Average annual percent change:							
1958-95	2.1	2.0	1.3	-7	-7	-5	-9
1990-95	1.1	3.2	2.1	-1.0	-1.0	-1.0	-9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 111. Farm machinery and equipment (SIC 3523): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	103.8	108.2	194.9	187.9	183.5	204.3	138.1
1973	108.6	110.5	238.7	219.9	216.0	242.0	158.6
1974	108.8	112.9	262.7	241.4	232.7	263.8	164.3
1975	111.8	114.8	261.5	233.8	227.8	250.3	179.3
1976	114.5	114.2	255.1	222.8	223.4	240.8	184.3
1977	115.1	114.1	262.7	228.3	230.3	245.8	195.9
1978	111.7	111.3	236.3	211.5	212.3	227.8	177.6
1979	112.6	113.7	279.6	248.3	246.0	265.9	202.0
1980	104.7	102.8	240.7	229.9	234.0	244.4	211.1
1981	108.6	105.5	231.1	212.8	219.2	224.4	207.8
1982	103.4	99.2	167.1	161.6	168.4	160.8	184.8
1983	99.2	96.1	138.2	139.3	143.8	136.5	158.7
1984	112.7	111.3	147.1	130.5	132.2	131.7	133.5
1985	101.8	100.3	118.0	116.2	117.7	114.8	124.0
1986	95.7	96.5	96.7	101.0	100.2	97.6	105.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	112.8	114.1	125.9	111.6	110.3	118.1	98.7
1989	124.0	124.1	141.2	113.9	113.7	125.0	93.9
1990	131.8	130.3	151.8	115.0	116.4	130.8	91.0
1991	125.3	120.8	131.5	104.9	108.9	121.5	86.5
1992	119.1	115.6	118.0	99.1	102.1	111.6	85.3
1993	123.7	125.3	135.1	109.2	107.8	118.8	88.6
1994	131.4	134.2	150.9	114.8	112.4	126.9	86.9
1995	143.4	142.7	156.0	108.8	109.3	123.1	84.9
Average annual percent change:							
1972-95	1.4	1.3	-1.0	-2.3	-2.2	-2.2	-2.1
1990-95	1.7	1.8	.6	-1.1	-1.3	-1.2	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 112. Lawn and garden equipment (SIC 3524): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	69.1	71.7	59.3	85.8	82.7	78.6	96.6
1973	70.0	73.1	63.3	90.4	86.6	85.8	89.7
1974	76.6	78.6	79.5	103.8	101.1	99.4	106.2
1975	66.0	68.8	53.9	81.6	78.3	73.4	94.8
1976	66.6	72.3	54.0	78.7	74.7	71.8	84.5
1977	72.9	73.8	57.8	79.3	78.3	76.5	84.5
1978	77.7	77.0	67.6	87.0	87.8	86.9	91.4
1979	83.3	84.2	83.9	100.7	99.6	98.5	103.4
1980	77.8	79.1	64.4	82.8	81.5	74.9	103.4
1981	72.3	73.3	53.2	73.6	72.6	67.6	89.7
1982	77.6	81.3	58.1	74.9	71.5	64.9	93.1
1983	79.2	81.1	61.2	77.3	75.5	72.8	84.5
1984	79.3	81.0	75.4	85.1	83.1	83.8	91.3
1985	82.4	85.3	76.4	92.7	89.6	90.1	87.9
1986	93.2	93.3	80.5	86.4	86.3	86.4	86.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	97.5	97.9	103.9	106.6	106.2	107.5	101.7
1989	93.2	92.2	91.1	97.7	98.8	101.0	91.7
1990	94.8	95.8	99.1	104.5	103.5	105.5	96.7
1991	95.8	97.2	91.6	95.6	94.2	93.0	98.3
1992	106.7	106.8	99.8	91.6	93.4	92.5	96.7
1993	114.7	113.9	111.7	97.4	98.1	100.0	91.7
1994	116.6	121.0	129.9	111.4	107.3	110.6	96.7
1995	126.3	126.3	128.8	101.9	101.9	102.5	100.0
Average annual percent change:							
1972-95	2.7	2.5	3.4	.8	.8	1.2	2
1980-95	5.9	5.7	5.4	-5	-3	-6	.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 113. Construction machinery (SIC 3531): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	86.2	87.7	144.7	167.9	165.0	181.1	132.5
1973	87.9	90.5	168.6	191.8	186.3	206.0	146.0
1974	93.8	96.3	186.9	199.2	194.3	214.6	152.9
1975	87.7	88.3	163.6	186.5	185.2	200.4	154.8
1976	88.7	88.8	154.9	174.6	178.5	188.1	158.1
1977	92.7	90.4	173.3	186.9	191.6	205.1	164.0
1978	97.3	96.9	202.0	207.7	208.4	224.5	175.4
1979	91.5	87.1	188.0	205.5	215.9	231.6	184.0
1980	88.5	85.1	165.8	187.4	194.7	200.4	183.3
1981	86.5	83.6	150.3	173.8	179.8	186.3	166.7
1982	78.6	70.8	100.7	128.2	142.2	134.0	158.7
1983	78.4	71.6	81.0	103.3	113.2	106.7	126.3
1984	91.6	88.9	105.1	114.7	118.2	117.4	119.4
1985	92.2	89.4	100.9	108.4	112.8	110.2	117.8
1986	99.1	96.0	104.1	105.1	108.4	106.4	112.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	107.6	109.6	113.1	105.1	103.2	109.8	93.5
1989	110.2	109.0	114.6	104.0	105.1	110.8	96.6
1990	109.6	107.3	115.3	105.3	107.4	111.0	102.2
1991	101.0	98.8	95.1	94.2	96.3	95.9	96.9
1992	100.6	101.4	92.1	91.5	90.8	89.8	92.3
1993	107.0	108.2	104.3	97.5	98.4	98.5	93.2
1994	123.2	124.3	118.0	98.8	94.9	103.1	82.7
1995	132.9	134.1	130.1	97.9	97.0	110.6	76.9
Average annual percent change:							
1980-95	1.9	2.0	1.5	-4	-5	-3	-9
1980-95	3.9	4.6	2.4	-14	-20	-1	-5.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 114. Mining machinery and equipment (SIC 3532): indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	96.0	94.6	148.1	154.3	156.6	174.5	129.8
1973	102.2	102.4	169.5	185.8	165.6	185.7	135.3
1974	109.9	110.0	204.8	185.3	186.1	213.6	144.7
1975	108.4	106.7	230.7	216.8	216.1	247.8	168.7
1976	93.8	91.9	215.8	237.7	204.7	264.9	186.9
1977	92.7	91.9	212.2	228.9	230.9	247.8	205.7
1978	87.4	84.9	193.6	221.6	228.0	241.7	207.4
1979	89.3	87.9	193.2	216.3	219.9	232.1	201.9
1980	92.5	90.6	198.6	214.7	219.2	228.3	205.7
1981	91.9	90.9	188.5	205.0	207.4	212.4	200.0
1982	84.9	80.4	145.4	171.2	180.8	174.5	180.8
1983	82.5	78.4	97.3	118.0	124.2	113.4	140.8
1984	90.2	87.3	108.4	120.2	124.2	120.8	129.8
1985	93.7	89.8	108.2	113.4	118.3	113.4	126.0
1986	95.1	92.0	99.4	104.6	108.1	103.7	114.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.0	102.1	100.9	98.9	98.8	101.0	95.5
1989	107.0	106.7	107.4	100.4	100.6	103.0	97.0
1990	98.4	97.8	106.6	108.3	109.0	113.0	103.0
1991	90.0	87.5	89.6	99.5	102.4	100.0	106.0
1992	91.1	88.0	83.3	92.4	94.6	93.0	97.0
1993	109.5	107.9	98.8	90.2	91.6	90.0	94.0
1994	99.5	101.0	93.7	94.2	92.8	91.0	95.5
1995	109.3	110.6	109.3	100.0	98.8	99.0	98.5
Average annual percent change:							
1972-95	.8	.7	-1.3	-1.9	-2.0	-2.4	-1.2
1990-95	2.1	2.5	.5	-1.6	-1.9	-2.6	-1.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 115. Oil and gas field machinery (SIC 3533): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	148.1	148.7	170.4	115.0	114.6	129.4	93.2
1973	156.9	161.2	201.1	128.2	124.8	141.6	100.7
1974	180.9	186.1	264.6	145.3	142.2	165.2	109.2
1975	160.0	163.9	280.4	175.2	171.1	202.9	125.1
1976	149.2	147.9	268.7	180.1	181.7	212.5	137.7
1977	148.8	149.6	285.7	182.0	191.0	221.5	146.9
1978	161.3	165.4	351.7	218.1	212.7	249.8	158.9
1979	155.2	156.4	363.9	234.4	232.6	272.4	175.4
1980	152.4	156.0	414.7	272.1	265.8	310.8	201.9
1981	153.2	160.3	539.1	351.8	336.3	399.3	246.1
1982	141.9	140.1	435.1	306.7	310.8	358.4	241.5
1983	131.1	125.2	235.2	179.4	187.9	198.9	171.5
1984	126.0	124.6	223.7	177.6	179.5	197.5	153.6
1985	115.2	114.4	207.8	180.4	181.7	196.4	159.4
1986	105.9	101.5	130.3	123.0	128.3	130.5	124.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	103.0
1988	123.1	123.8	138.8	112.7	112.1	114.6	108.6
1989	116.1	115.4	125.9	108.4	109.1	108.5	109.9
1990	113.9	119.4	139.5	122.5	116.8	121.6	109.9
1991	110.9	116.3	146.1	131.7	125.5	134.7	112.6
1992	125.7	130.6	140.8	111.9	107.7	116.4	95.4
1993	122.1	130.2	135.6	111.1	104.1	116.0	87.4
1994	119.9	127.1	133.0	110.9	104.7	119.2	84.1
1995	117.5	125.1	136.1	115.9	108.8	126.3	84.1
Average annual percent change:							
1987-95	-3	-1	-1	.2	.0	.0	-1
1990-95	.6	.9	-.5	-1.1	-1.4	.8	-5.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 116. Machine tools (SIC 3541, 3542): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	95.3	98.4	185.5	173.8	168.2	185.8	143.1
1973	104.9	111.0	212.1	202.3	191.1	218.1	151.8
1974	107.3	112.9	233.3	217.4	206.7	238.8	160.2
1975	101.5	102.9	200.6	197.7	195.0	217.6	163.1
1976	97.3	97.3	173.1	178.0	177.8	199.0	148.0
1977	99.1	101.1	184.9	186.6	182.9	196.5	160.2
1978	101.7	105.1	207.0	203.5	196.9	220.2	162.9
1979	100.8	104.0	219.5	215.2	211.1	239.5	170.4
1980	97.3	99.2	217.3	223.2	219.0	245.6	181.2
1981	95.1	96.6	208.6	219.4	215.9	237.6	185.1
1982	95.5	92.9	141.7	165.6	170.9	170.9	170.9
1983	78.4	75.4	95.5	123.0	128.0	126.7	130.1
1984	88.5	86.3	110.8	125.3	128.5	130.8	125.3
1985	91.1	89.7	119.3	131.0	133.0	135.2	129.6
1986	92.6	92.4	112.2	121.2	121.4	121.5	121.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.7	102.8	107.2	106.5	104.3	105.8	101.7
1989	102.4	105.6	111.9	109.3	106.0	109.3	100.4
1990	99.0	98.9	99.8	100.8	100.9	102.5	98.3
1991	93.0	92.4	85.2	91.7	92.3	91.2	94.0
1992	109.9	109.6	92.5	84.1	84.4	82.4	87.7
1993	112.9	114.7	94.6	83.8	82.5	79.9	86.8
1994	108.5	113.2	95.8	88.3	84.7	83.4	86.8
1995	113.6	119.3	107.4	94.5	90.0	89.7	90.6
Average annual percent change:							
1988-95	1.3	1.5	-2	-1.5	-1.6	-2.0	-9
1990-95	2.8	3.8	1.5	-1.3	-2.3	-2.6	-1.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 117. Metal cutting machine tools (SIC 3541): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	80.4	94.1	155.9	172.4	165.6	183.4	141.8
1973	101.4	107.5	203.1	200.4	189.0	218.4	149.0
1974	108.5	112.7	230.7	218.7	204.6	241.2	156.4
1975	100.3	103.0	204.2	203.6	198.2	223.6	163.3
1976	95.2	98.2	176.3	185.2	183.3	206.1	152.1
1977	98.4	102.2	191.6	194.8	187.5	204.8	164.6
1978	102.0	107.5	218.0	213.7	202.8	231.7	163.7
1979	100.9	106.9	232.8	230.8	217.8	251.0	173.4
1980	98.5	103.2	237.0	240.7	229.6	262.6	185.4
1981	95.7	100.8	236.0	244.1	234.2	263.1	195.7
1982	85.8	84.1	154.6	160.2	183.8	186.2	180.8
1983	75.6	73.9	100.3	132.6	135.7	134.6	137.1
1984	87.2	86.8	114.6	131.4	133.6	135.8	131.1
1985	89.9	89.4	120.5	134.1	134.9	136.9	132.7
1986	92.0	93.1	112.3	123.2	121.7	120.9	123.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	94.8	96.3	100.0	105.5	103.2	104.8	102.3
1989	99.9	103.2	109.0	109.1	105.6	109.0	100.0
1990	99.2	99.6	97.8	98.6	99.1	101.4	95.3
1991	94.8	94.5	85.3	89.9	90.2	89.7	91.2
1992	113.0	112.9	93.3	82.6	82.6	81.0	85.4
1993	111.4	112.9	89.9	80.7	79.6	78.6	84.8
1994	110.0	114.7	85.0	84.6	81.1	79.3	84.2
1995	111.8	117.2	101.2	90.4	86.3	84.5	89.5
Average annual percent change:							
1988-95	1.5	1.6	-2	-1.7	-1.8	-2.3	-9
1990-95	2.4	3.5	.7	-1.7	-2.7	-3.6	-1.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 118. Metal forming machine tools (SIC 3542): indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	106.3	107.9	188.2	177.0	174.4	180.7	147.0
1973	112.5	119.1	232.9	207.0	195.6	217.1	158.8
1974	110.3	113.6	238.6	215.2	210.0	233.1	170.5
1975	103.1	102.0	191.8	186.1	188.1	203.5	182.7
1976	101.0	99.8	165.5	163.8	165.8	182.8	137.3
1977	99.8	98.7	169.4	169.7	171.6	185.0	149.2
1978	99.8	99.6	181.8	182.1	182.5	195.3	160.8
1979	98.5	96.5	188.8	191.7	195.6	214.6	182.7
1980	92.7	88.6	172.7	186.2	194.9	209.0	170.7
1981	89.0	84.5	147.1	165.2	174.0	183.9	156.9
1982	84.1	79.6	112.5	133.7	141.2	139.1	145.1
1983	85.6	79.1	87.8	102.5	110.9	110.3	111.9
1984	90.7	87.6	102.3	112.7	116.7	120.7	109.9
1985	93.1	90.6	116.4	125.0	128.2	132.1	121.6
1986	93.7	91.2	109.7	117.0	120.2	122.9	115.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	113.1	117.3	123.4	109.1	105.2	108.3	100.0
1989	107.9	110.7	118.4	109.8	107.0	110.2	101.6
1990	97.7	98.6	104.3	106.8	105.8	105.6	106.3
1991	88.4	87.1	85.1	96.3	97.7	95.4	101.6
1992	102.5	101.8	90.6	88.3	89.0	86.1	93.8
1993	115.0	117.7	106.1	92.2	90.1	88.9	92.2
1994	104.3	108.9	102.6	98.3	94.2	94.4	93.8
1995	116.2	122.6	122.6	105.5	100.0	103.7	93.8
Average annual percent change:							
1983-95	.9	1.1	.2	-1.1	-1.3	-1.5	-1.0
1990-95	3.5	4.5	3.3	-2	-1.1	-4	-2.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 119. Machine tool accessories (SIC 3545): indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	100.3	101.2	91.2	90.9	90.1	90.5	89.5
1973	105.9	109.8	116.2	109.7	105.8	109.4	97.3
1974	103.9	106.2	122.1	117.5	114.9	119.1	105.2
1975	100.5	96.5	102.1	101.6	105.8	106.9	103.3
1976	98.3	97.4	101.6	103.4	104.4	104.7	103.8
1977	99.6	100.3	112.3	112.7	111.9	112.8	109.9
1978	103.2	105.4	127.0	123.1	120.5	121.5	118.1
1979	100.6	102.4	133.9	133.1	130.7	133.3	124.7
1980	98.8	98.8	133.6	135.2	135.3	135.7	131.9
1981	101.6	100.3	132.0	129.9	131.5	131.3	131.9
1982	86.7	83.9	95.0	107.1	113.2	107.6	126.8
1983	82.6	80.7	77.4	93.8	96.0	92.1	105.2
1984	94.6	95.6	100.3	108.0	104.6	103.5	107.2
1985	92.3	92.7	98.5	106.7	106.3	105.4	108.5
1986	95.0	93.6	95.9	101.0	102.5	100.5	107.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.2	99.4	107.5	109.4	108.1	108.7	106.5
1989	102.5	103.6	116.0	113.1	111.9	112.5	110.5
1990	104.1	103.9	111.9	107.5	107.7	107.3	108.5
1991	104.6	103.8	103.2	98.7	99.4	98.4	102.0
1992	96.8	98.1	91.5	94.6	93.3	92.9	94.1
1993	101.5	103.2	95.9	94.4	92.9	91.0	97.4
1994	114.8	118.8	111.5	97.2	93.9	92.7	98.7
1995	122.3	127.3	124.1	101.5	97.5	97.0	98.7
Average annual percent change:							
1983-95	1.3	1.5	1.8	.4	.3	.2	.6
1990-95	3.3	4.1	2.1	-1.1	-2.0	-2.0	-1.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 120. Pumps and compressors (SIC 3561, 3563, 3594): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	78.8	80.3	85.9	106.0	107.0	119.9	90.7
1973	84.8	86.3	99.2	117.0	114.9	130.9	94.6
1974	84.3	84.7	106.8	126.8	126.1	146.3	100.4
1975	79.9	79.8	99.3	124.3	124.5	138.5	106.6
1976	85.3	85.9	105.0	123.1	122.3	135.2	105.7
1977	88.1	88.7	115.0	130.5	129.7	144.2	111.2
1978	89.9	89.8	122.4	136.2	136.3	152.5	115.7
1979	89.7	89.6	130.9	145.8	146.1	164.5	122.8
1980	87.2	87.0	128.5	147.4	147.7	163.5	127.7
1981	90.2	89.5	128.0	147.0	143.0	154.3	128.5
1982	83.6	82.0	112.2	134.2	136.8	138.1	135.0
1983	86.7	83.8	92.2	106.3	110.0	109.0	111.1
1984	91.4	90.2	105.0	114.9	116.4	120.2	111.8
1985	92.1	90.8	102.3	111.1	112.7	115.5	108.9
1986	93.6	93.0	98.6	103.2	103.8	102.3	105.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.0	106.1	112.4	107.1	106.0	108.5	102.8
1989	102.6	103.1	106.7	104.0	103.5	104.6	102.1
1990	104.9	104.9	108.8	103.7	103.8	105.4	101.8
1991	105.5	105.9	111.7	105.8	105.4	107.1	103.4
1992	103.7	104.8	103.2	99.6	98.5	103.4	92.4
1993	107.9	109.2	106.8	99.0	97.8	102.7	91.7
1994	113.7	116.0	114.3	100.5	98.5	110.2	83.8
1995	114.8	116.2	118.5	101.5	100.3	111.9	85.6
Average annual percent change:							
1958-95	2.0	2.0	2.6	.5	.6	.5	.6
1990-95	1.8	2.1	1.4	-4	-7	1.2	-3.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 121. Pumps and pumping equipment (SIC 3561, 3594): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	81.1	82.6	92.5	114.1	112.0	124.9	94.9
1973	84.0	86.8	104.7	124.6	120.6	135.5	100.6
1974	83.5	83.9	104.9	125.6	125.0	143.6	100.0
1975	80.7	80.5	103.8	128.7	129.0	139.6	114.7
1976	83.9	84.7	107.4	128.1	126.8	137.3	112.8
1977	90.5	91.1	115.9	128.0	127.2	139.9	110.0
1978	91.4	90.8	122.6	134.2	135.1	149.7	115.7
1979	91.4	90.1	129.6	141.7	143.8	160.4	121.2
1980	83.3	87.5	130.9	148.2	149.6	163.4	130.8
1981	92.5	91.5	132.9	143.6	145.3	154.9	132.8
1982	84.7	82.5	114.0	134.6	138.1	137.6	138.9
1983	87.1	84.1	92.4	106.1	109.8	108.0	112.1
1984	92.0	90.5	105.2	114.3	116.2	118.7	112.6
1985	91.9	90.9	102.3	111.3	112.6	114.2	110.3
1986	92.7	92.2	98.2	105.9	106.5	104.4	109.3
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.7	106.3	112.9	106.9	105.2	107.0	105.2
1989	101.3	101.1	106.6	105.2	105.4	104.5	106.6
1990	103.4	102.3	107.2	103.8	104.8	104.5	105.2
1991	102.5	101.8	106.3	103.7	104.4	102.8	106.6
1992	98.6	99.1	97.7	99.2	98.6	101.0	95.3
1993	105.2	106.0	101.1	96.1	95.4	97.6	92.5
1994	110.6	112.8	105.8	95.6	93.8	101.4	83.6
1995	113.4	113.6	107.0	94.4	94.2	101.7	84.0
Average annual percent change:							
1972-95	1.5	1.4	.6	-.8	-.7	-.9	-.5
1990-95	1.8	2.1	.0	-1.9	-2.1	-.5	-4.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 122. Ball and roller bearings (SIC 3562): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	122.4	101.6	130.0	126.8	129.0	128.8	126.2
1973	108.0	109.3	151.9	140.8	139.0	140.8	133.3
1974	106.9	107.3	158.3	141.3	144.8	147.7	135.5
1975	102.8	98.2	128.5	125.0	130.9	130.6	132.4
1976	105.0	102.0	130.5	124.3	129.0	127.8	129.3
1977	105.2	102.5	136.7	130.0	133.4	132.4	136.5
1978	110.7	106.5	145.5	131.4	136.6	137.3	135.4
1979	110.2	106.1	152.5	136.3	141.1	143.2	134.4
1980	98.2	95.5	133.8	136.3	140.1	142.6	132.3
1981	97.1	94.3	131.0	135.0	139.0	139.9	125.1
1982	85.8	80.2	93.6	106.1	116.7	112.6	130.2
1983	87.3	85.1	98.6	101.5	104.1	100.6	115.6
1984	95.4	98.0	111.5	116.9	118.2	113.9	124.0
1985	91.5	90.8	101.4	110.7	111.9	109.1	120.8
1986	94.1	93.2	97.3	103.4	104.4	101.3	114.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.9	104.5	108.7	103.8	102.2	103.5	97.9
1989	99.0	99.4	103.5	104.6	104.1	105.7	99.0
1990	93.1	92.5	95.9	102.9	103.6	104.7	100.0
1991	89.6	87.1	85.8	95.7	98.5	99.7	94.8
1992	97.8	95.6	90.0	92.1	94.2	97.2	84.4
1993	103.8	104.1	94.0	90.5	90.3	93.4	80.2
1994	106.3	110.3	99.9	94.0	90.6	93.4	81.3
1995	107.2	110.6	103.9	96.9	93.9	96.8	84.4
Average annual percent change:							
1972-95	1.9	2.2	1.9	.0	-3	-3	-4
1980-95	2.9	3.6	1.6	-1.2	-1.9	-1.6	-3.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 123. Air and gas compressors (SIC 3563): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	74.9	76.6	73.7	98.4	96.3	108.8	82.6
1973	87.6	86.2	88.9	101.5	103.1	120.8	83.3
1974	85.5	86.3	110.8	129.4	129.2	153.0	100.9
1975	78.7	79.2	90.9	115.5	114.7	136.3	91.2
1976	88.8	89.0	100.3	113.0	112.7	131.4	90.1
1977	83.1	83.9	112.9	135.8	134.5	154.0	113.2
1978	86.4	87.8	121.4	145.5	138.2	158.7	115.0
1979	86.1	87.9	132.7	154.1	150.9	174.1	125.6
1980	84.8	86.5	123.9	146.1	143.3	163.6	121.1
1981	85.5	86.7	119.1	139.2	137.4	153.0	120.2
1982	81.4	81.6	108.9	133.7	133.7	139.5	127.2
1983	85.9	83.4	91.9	107.0	110.2	111.3	108.8
1984	80.1	89.7	104.8	116.3	118.8	123.3	109.7
1985	80.2	80.9	102.4	111.1	112.7	118.4	108.1
1986	88.0	95.6	93.7	97.6	98.0	97.5	98.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.7	105.7	111.4	107.5	106.5	112.1	98.2
1989	105.3	107.4	108.9	101.6	99.6	104.8	93.9
1990	107.8	109.9	111.7	103.7	101.7	107.3	95.6
1991	110.2	112.9	121.4	110.2	107.8	116.9	97.4
1992	112.7	115.1	113.2	100.4	98.3	108.9	86.8
1993	111.5	113.9	117.3	106.2	102.9	114.5	90.4
1994	117.3	119.8	129.8	110.7	108.4	130.8	94.2
1995	115.0	118.5	133.9	118.5	113.0	135.5	88.6
Average annual percent change:							
1972-95	1.9	1.9	2.6	.7	.7	1.0	.3
1980-95	1.3	1.5	3.7	2.4	2.1	4.8	-1.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 124. Refrigeration and heating equipment (SIC 3585): Indexes of output per hour and related measures, 1972-85
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	101.0	100.4	90.1	89.2	89.7	88.8	92.2
1973	100.3	99.0	101.7	101.4	102.7	101.1	105.7
1974	103.4	99.8	95.0	91.9	95.2	92.7	101.8
1975	95.3	91.0	61.3	71.9	75.7	70.4	90.4
1976	89.1	87.8	77.2	86.3	87.9	84.6	95.7
1977	76.3	95.0	81.2	92.7	96.0	92.1	106.4
1978	98.3	97.2	100.4	102.1	103.3	100.0	112.1
1979	96.8	96.1	100.9	102.1	105.0	102.4	111.9
1980	90.7	87.2	83.2	81.7	85.4	89.6	111.3
1981	95.0	92.5	89.5	93.3	95.8	93.2	106.6
1982	95.3	90.9	78.7	83.6	86.6	81.1	101.8
1983	95.0	93.7	82.5	86.0	88.1	83.4	101.2
1984	100.1	99.7	97.1	97.0	97.4	95.1	103.9
1985	95.1	96.1	94.4	96.3	98.3	95.1	107.2
1986	95.8	94.3	92.2	96.3	97.8	95.6	103.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.0	104.3	108.5	104.3	104.1	104.8	102.1
1989	109.0	107.9	114.3	104.9	105.9	107.4	101.8
1990	106.3	102.5	99.5	93.7	97.1	95.3	99.4
1991	104.8	102.9	94.8	90.5	92.1	90.2	97.6
1992	107.6	107.0	101.9	94.7	95.2	95.0	95.8
1993	111.8	113.8	109.8	98.2	96.5	96.6	96.1
1994	115.1	119.9	125.1	108.7	104.3	105.9	100.0
1995	115.0	117.4	130.5	113.5	111.1	114.0	103.3
Average annual percent change:							
1987-88	1.6	1.7	3.7	2.1	1.9	2.1	1.3
1990-95	1.6	2.8	5.6	3.9	2.7	3.4	8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 125. Carburetors, pistons, rings, and valves (SIC 3582): Indexes of output per hour and related measures, 1972-85
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	97.7	93.9	115.5	118.2	123.0	124.8	116.0
1973	102.9	99.9	149.5	145.3	149.8	153.1	136.5
1974	88.4	83.3	122.5	136.6	147.0	149.1	138.8
1975	80.8	73.5	100.1	123.8	136.2	136.5	136.5
1976	87.6	83.7	119.8	136.7	143.2	144.0	140.9
1977	85.4	82.0	121.7	142.5	148.3	150.2	140.9
1978	81.0	78.8	117.7	145.3	153.3	154.9	147.8
1979	81.9	78.2	130.4	159.2	166.7	169.9	154.7
1980	79.6	73.5	110.0	138.2	149.6	148.0	157.0
1981	80.8	74.6	113.1	140.0	151.6	152.8	147.8
1982	79.7	73.3	105.3	132.1	143.7	136.7	163.7
1983	87.1	83.3	114.3	131.2	137.2	134.1	150.1
1984	95.1	90.0	141.6	149.0	153.9	153.7	154.5
1985	98.8	94.2	137.0	138.6	145.5	143.8	152.4
1986	95.7	93.9	124.5	130.1	132.6	126.8	147.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	109.9	111.7	128.5	98.0	94.5	92.8	101.7
1989	119.4	120.0	98.8	80.2	79.9	77.8	99.8
1990	114.1	112.8	85.2	74.6	75.6	75.9	74.6
1991	115.1	112.5	80.3	68.8	71.4	71.8	69.5
1992	126.4	124.9	84.3	66.7	67.5	67.5	67.8
1993	136.4	138.9	82.4	67.7	66.8	66.7	66.1
1994	142.9	147.9	105.1	73.8	71.1	72.7	64.4
1995	143.0	150.6	108.1	76.3	72.4	71.5	76.3
Average annual percent change:							
1972-88	1.7	2.1	-2	-1.9	-2.3	-2.4	-1.8
1990-95	4.6	6.0	5.1	5	5	-1.2	5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 126. Transformers, except electronic (SIC 3612): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	100.0	97.0	911.9	112.0	115.4	114.2	118.9
1973	100.2	98.0	925.7	125.5	128.2	118.3	128.1
1974	97.8	95.0	925.4	128.2	132.0	130.7	135.5
1975	95.0	93.3	935.5	120.6	125.9	96.5	126.4
1976	91.9	89.1	924.4	120.6	123.8	96.8	123.6
1977	102.1	100.0	973.3	105.1	107.3	102.2	122.0
1978	105.0	103.1	1133.8	108.4	110.4	106.3	122.0
1979	108.8	107.6	1193.9	109.2	111.4	108.4	119.7
1980	111.5	108.6	1177.1	105.0	107.8	102.2	123.6
1981	105.9	104.7	114.0	106.7	108.9	104.4	121.2
1982	98.4	91.9	92.4	95.9	100.6	97.0	110.6
1983	95.0	92.8	89.8	94.6	96.8	91.6	111.4
1984	95.4	95.6	102.1	107.0	106.8	104.7	112.9
1985	97.0	97.4	102.3	105.4	105.0	103.0	110.6
1986	99.3	100.8	101.4	102.2	100.6	101.1	109.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	102.8	103.6	108.6	105.7	104.8	103.0	108.8
1989	104.3	104.8	107.3	102.9	102.4	99.5	110.6
1990	107.3	107.9	105.5	98.4	97.8	94.0	108.3
1991	110.7	110.1	99.7	90.1	90.6	86.6	101.5
1992	126.5	124.0	102.2	81.5	83.2	79.6	93.2
1993	121.8	121.7	100.2	82.3	82.4	79.8	89.4
1994	143.4	144.2	118.1	83.0	82.6	82.6	82.6
1995	159.9	158.5	130.2	81.5	82.2	81.2	84.8
Average annual percent change:							
1983-95	2.7	2.8	2.7	-0	0	-1	-5
1990-95	8.3	8.0	4.3	-3.7	-3.4	-2.9	-4.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 127. Switchgear and switchboard apparatus (SIC 3613): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	84.4	85.1	115.0	136.2	135.1	144.8	115.6
1973	88.2	89.7	130.3	147.7	145.2	157.1	121.5
1974	83.8	83.9	120.0	143.3	143.0	155.2	117.9
1975	80.3	77.4	87.9	121.8	128.4	128.8	119.1
1976	81.0	78.7	100.3	123.8	127.5	133.8	114.6
1977	83.8	82.9	118.5	138.0	140.5	152.0	117.4
1978	86.3	85.5	128.5	146.5	147.9	158.3	124.6
1979	87.5	87.3	131.2	149.9	150.4	159.9	131.1
1980	87.7	87.7	124.8	142.2	142.2	147.0	132.9
1981	85.4	85.1	118.8	138.1	139.6	145.0	128.7
1982	87.4	85.2	110.6	126.6	129.9	130.9	128.0
1983	80.2	88.6	108.6	129.4	129.6	124.5	119.1
1984	82.2	91.8	113.8	123.2	123.8	124.5	122.0
1985	95.1	94.6	106.1	113.7	114.3	116.5	110.1
1986	95.8	95.5	104.5	108.9	109.4	110.6	107.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.1	112.3	103.9	95.3	92.5	90.6	97.3
1989	106.5	108.4	102.5	95.3	94.6	92.5	100.0
1990	106.5	107.8	98.5	92.5	91.6	88.2	100.0
1991	103.9	105.9	90.2	88.9	85.2	80.2	98.0
1992	114.6	118.8	94.7	82.6	79.7	74.8	91.9
1993	123.1	126.6	97.9	79.8	77.4	72.9	88.5
1994	123.8	127.4	100.0	82.3	80.0	75.3	91.9
1995	131.7	134.3	108.8	82.6	81.0	75.9	93.8
Average annual percent change:							
1983-95	2.4	2.4	1.8	-0	-0	-1.2	0
1990-95	4.3	4.5	2.0	-2.2	-2.4	-3.0	-1.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 128. Motors and generators (SIC 3621): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	84.9	87.0	108.5	124.3	121.2	122.5	74.8
1973	89.0	90.3	121.7	126.7	124.8	129.7	91.3
1974	90.4	90.5	121.6	124.5	124.4	127.6	124.1
1975	82.7	82.6	98.9	129.8	129.9	127.2	118.1
1976	87.2	88.8	108.5	121.0	121.5	125.2	110.2
1977	90.9	91.2	116.8	120.4	120.0	121.4	125.3
1978	89.8	89.7	127.7	142.2	142.4	145.1	132.9
1979	89.7	90.4	129.7	144.6	143.5	144.6	140.2
1980	87.9	88.2	111.4	126.7	126.3	123.2	126.2
1981	91.6	91.3	114.4	124.9	125.4	124.4	127.6
1982	89.8	90.2	101.2	129.3	122.7	126.0	127.6
1983	90.5	88.5	95.5	126.6	127.8	126.4	112.1
1984	89.1	89.6	105.8	113.4	113.0	112.1	115.3
1985	94.9	94.3	98.2	120.5	124.2	122.4	109.3
1986	96.8	96.4	97.8	121.1	121.5	98.3	111.0
1987	100.0	100.0	100.0	120.0	120.0	120.0	100.0
1988	104.3	107.2	104.3	122.7	124.8	126.1	98.1
1989	103.6	105.2	106.6	120.0	121.4	124.2	92.2
1990	100.9	101.3	96.8	95.9	95.5	97.2	90.2
1991	104.4	105.6	95.9	91.9	90.8	91.2	89.8
1992	111.5	113.4	99.8	89.5	88.0	88.8	85.4
1993	127.1	129.9	112.0	88.1	88.2	87.0	83.4
1994	124.4	129.3	115.2	92.8	89.7	90.3	83.4
1995	139.1	141.3	127.8	91.9	90.5	92.7	83.4
Average annual percent change							
1984-95	2.8	2.9	1.5	-1.2	-1.2	-1.1	-1.8
1990-95	6.6	6.9	5.7	-8	-11	-9	-1.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 129. Major household appliances (SIC 3631, 3632, 3633, 3639): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index							
1972	65.9	65.8	77.9	118.2	118.4	117.2	122.5
1973	67.6	67.2	85.5	126.5	127.2	126.4	130.0
1974	68.3	68.1	77.2	113.1	116.8	114.2	127.3
1975	70.6	68.1	70.7	96.7	103.8	100.3	120.6
1976	72.5	70.7	78.2	107.8	110.6	106.7	128.1
1977	75.2	73.7	88.3	117.5	119.8	112.1	126.1
1978	75.4	72.2	91.9	121.9	127.2	126.0	132.0
1979	81.7	79.4	94.2	115.4	118.7	117.0	126.8
1980	79.3	78.3	85.8	107.9	112.2	110.2	121.8
1981	80.4	77.4	85.4	106.1	110.3	109.3	115.7
1982	81.8	77.3	73.9	90.3	95.8	91.7	113.8
1983	87.9	87.3	86.2	98.1	98.9	97.2	106.1
1984	91.8	91.5	96.4	105.1	105.4	106.0	102.7
1985	93.8	92.5	91.8	97.7	99.2	98.2	104.1
1986	99.0	98.1	97.9	98.9	99.8	99.8	100.0
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.6	105.1	104.8	98.4	99.8	100.5	96.8
1989	99.7	101.6	98.1	98.4	98.5	98.7	95.9
1990	101.8	101.9	90.9	89.4	89.2	89.8	96.3
1991	104.4	104.4	87.1	84.2	83.4	84.0	80.8
1992	107.0	108.5	95.1	89.4	89.5	89.8	82.9
1993	120.7	121.6	108.9	90.2	89.5	90.7	84.2
1994	131.2	131.9	125.8	95.9	95.4	95.9	93.2
1995	125.7	124.3	119.5	95.1	95.1	95.1	100.7
Average annual percent change							
1984-95	4.0	3.9	3.2	-7	-7	-5	-1.3
1990-95	4.3	4.1	3.6	1.2	1.3	1.2	3.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 130. Household cooking equipment (SIC 3631): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	58.6	59.7	63.5	108.4	108.4	108.0	98.1
1973	61.8	62.9	72.4	117.1	115.0	117.8	106.0
1974	64.4	62.0	62.9	97.6	101.4	99.9	106.0
1975	71.7	68.4	58.3	81.3	85.2	82.9	92.1
1976	73.7	72.5	76.5	103.8	105.4	102.3	116.1
1977	72.7	71.4	82.8	113.8	116.0	113.1	126.1
1978	73.0	70.3	89.8	123.0	127.8	127.8	128.3
1979	79.1	79.6	104.5	132.0	132.9	127.8	150.0
1980	76.0	77.3	98.0	130.3	128.2	124.9	140.2
1981	77.3	78.7	98.2	127.0	124.7	123.6	128.3
1982	82.3	78.4	94.9	103.1	108.2	106.6	124.0
1983	88.2	87.2	106.5	122.3	121.0	116.8	136.2
1984	92.0	93.0	117.8	127.5	128.5	127.3	124.0
1985	95.3	95.4	98.7	109.4	110.5	109.5	114.1
1986	104.5	103.0	104.4	98.8	101.4	100.0	106.0
1987	106.0	106.0	106.0	100.0	100.0	100.0	100.0
1988	116.1	114.0	113.0	97.3	98.1	101.8	96.0
1989	98.8	97.0	89.9	92.9	92.7	-1.7	86.0
1990	95.5	100.0	85.9	90.3	85.8	85.0	76.0
1991	104.9	102.1	83.4	79.8	81.7	85.2	70.0
1992	100.8	102.0	87.6	90.8	85.8	88.8	76.0
1993	103.7	104.5	98.8	95.8	94.9	88.2	74.0
1994	127.4	129.7	111.4	87.4	85.8	89.3	74.0
1995	125.5	124.0	108.7	86.6	87.7	89.9	80.0
Average annual percent change:							
1988-95	3.4	3.4	3.5	-1	-1	2	-1
1990-95	4.8	4.4	4.8	-1	-4	2	1.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 131. Household refrigerators and freezers (SIC 3632): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	68.2	70.1	93.0	134.4	132.7	132.4	134.0
1973	70.1	70.8	98.5	137.7	136.2	134.2	146.1
1974	71.9	72.7	92.8	128.8	127.3	123.8	146.1
1975	71.2	69.7	93.2	130.9	133.6	127.8	163.3
1976	71.8	70.1	91.4	127.6	130.3	125.0	158.0
1977	77.3	77.1	107.2	136.7	136.1	136.1	146.1
1978	75.9	73.9	109.9	144.8	148.6	148.6	148.8
1979	88.8	84.5	95.0	109.4	112.4	114.1	104.9
1980	88.1	81.8	86.3	98.0	105.8	105.8	102.2
1981	90.6	82.9	87.4	98.5	105.4	102.0	102.2
1982	95.3	84.5	79.4	82.5	87.2	85.2	97.6
1983	97.8	97.0	79.3	81.3	81.8	81.0	95.4
1984	97.5	94.7	88.5	80.8	83.4	94.5	87.8
1985	104.1	101.2	87.7	84.3	86.7	85.2	95.0
1986	101.2	100.9	93.8	92.7	93.0	95.0	92.7
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.3	103.0	107.4	104.0	104.0	103.7	107.3
1989	106.2	110.1	109.3	103.9	99.2	96.9	112.2
1990	107.3	106.9	96.1	99.8	99.9	87.0	104.9
1991	111.8	116.8	98.2	86.0	82.5	86.1	95.1
1992	116.0	116.9	115.8	94.7	98.8	98.1	97.8
1993	116.8	115.4	121.7	104.2	105.4	104.2	112.2
1994	126.7	127.5	140.4	110.8	110.1	110.6	107.3
1995	134.2	124.3	133.4	107.5	107.4	105.1	119.5
Average annual percent change:							
1988-95	4.3	4.3	3.1	-1.2	-1.1	-1.0	-1.6
1990-95	3.0	3.1	4.8	3.7	3.6	3.9	2.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 132. Household laundry equipment (SIC 3633): Indexes of output per hour and related measures, 1972-95
(1977=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.0	65.1	92.4	137.8	141.2	137.5	161.6
1973	72.3	70.4	100.7	136.3	143.1	139.7	151.6
1974	69.3	65.7	96.1	124.3	126.3	120.5	161.6
1975	75.1	73.3	71.8	95.7	92.6	99.2	126.8
1976	77.9	75.8	78.2	100.4	105.9	101.2	130.8
1977	78.3	74.5	96.5	110.5	116.1	112.6	134.6
1978	80.6	76.1	93.3	110.8	117.3	114.3	134.6
1979	84.7	80.5	96.9	114.4	120.4	118.3	130.6
1980	80.0	74.8	85.9	107.4	114.9	111.2	134.6
1981	80.4	74.9	84.7	105.1	113.1	110.6	126.8
1982	82.0	74.4	73.5	88.2	96.8	95.1	119.2
1983	88.2	84.5	81.5	92.4	96.4	96.5	96.1
1984	92.8	90.7	90.7	97.8	100.0	100.0	100.0
1985	90.8	90.5	93.3	95.5	103.1	102.2	107.6
1986	97.4	97.0	101.1	103.8	104.2	104.3	103.8
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.1	102.5	101.2	95.4	98.8	99.3	96.2
1989	98.7	98.4	99.0	100.3	100.6	101.4	96.2
1990	104.0	105.1	98.4	95.5	94.6	94.5	94.6
1991	111.9	111.5	95.5	90.0	85.6	85.8	84.6
1992	115.8	120.3	100.3	86.2	85.0	85.8	80.8
1993	144.8	149.3	123.4	85.2	82.6	84.4	73.1
1994	180.8	149.9	145.4	98.6	97.0	91.5	126.9
1995	131.6	127.8	124.7	94.7	97.6	91.5	130.2
Average annual percent change:							
1980-95	3.8	3.7	2.6	-1.2	-1.1	-0.9	-1.8
1990-95	4.8	4.0	4.6	-2	6	-1.1	9.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 133. Household appliances, not elsewhere classified (SIC 3639): Indexes of output per hour and related measures, 1972-95
(1977=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	66.0	64.5	56.9	86.3	87.7	81.6	113.7
1973	63.7	61.1	58.8	106.0	112.5	110.7	120.6
1974	64.3	61.7	52.9	97.8	102.0	100.7	106.9
1975	66.0	64.0	53.2	80.5	83.1	78.8	103.3
1976	69.9	68.8	62.4	89.2	90.6	87.7	103.3
1977	73.5	72.8	71.4	97.2	98.1	97.7	99.9
1978	75.5	71.0	72.9	96.5	102.7	99.9	113.7
1979	76.1	73.0	75.1	103.9	108.3	107.0	113.7
1980	73.5	70.2	69.0	93.9	96.1	96.2	106.9
1981	73.7	71.4	68.9	93.4	96.4	94.8	103.3
1982	72.7	70.2	67.3	85.7	88.7	87.0	98.5
1983	80.6	80.8	74.3	98.4	96.1	99.2	93.1
1984	88.8	88.1	89.2	103.8	101.2	103.8	89.8
1985	86.3	87.8	87.6	101.5	100.0	100.9	98.5
1986	89.1	87.9	91.8	102.8	104.3	106.2	98.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.6	100.2	94.8	94.0	94.4	94.7	93.1
1989	98.3	98.6	91.8	95.3	93.1	93.9	89.7
1990	91.8	92.1	80.0	87.2	86.9	88.5	79.3
1991	80.5	81.4	69.2	86.0	85.0	87.0	75.9
1992	81.6	80.3	73.2	80.0	79.4	80.2	75.9
1993	117.8	120.8	93.8	79.8	77.5	78.6	72.4
1994	118.8	118.2	96.1	82.4	83.1	84.7	75.9
1995	118.0	115.5	101.8	87.7	88.1	89.3	82.8
Average annual percent change:							
1980-95	3.7	3.7	3.6	-1.1	-1.1	4	-1.7
1990-95	4.8	4.6	4.9	-1	3	2	3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 134. Electric lamp bulbs and tubes (SIC 3641): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	66.6	66.7	104.5	157.0	156.7	162.5	124.4
1973	61.3	61.4	104.6	170.7	170.3	177.0	129.7
1974	64.4	63.2	101.4	157.3	160.4	164.5	135.2
1975	64.0	63.1	86.3	134.9	136.7	139.4	121.7
1976	69.4	70.3	99.6	143.6	141.7	144.9	124.4
1977	71.5	72.0	104.8	146.5	145.5	148.8	127.1
1978	74.2	75.6	109.3	147.2	144.5	148.0	124.4
1979	76.1	76.8	112.8	148.1	145.8	151.4	118.9
1980	70.1	69.5	97.0	138.3	139.6	143.6	116.3
1981	72.4	72.6	91.1	125.8	125.4	128.1	110.8
1982	77.3	76.7	88.8	114.8	115.8	119.0	97.6
1983	85.4	88.5	94.0	110.1	106.2	106.7	92.7
1984	86.4	88.3	97.1	112.3	109.9	111.7	100.0
1985	94.2	94.3	102.6	109.0	108.8	110.0	102.4
1986	91.5	91.8	76.2	104.1	103.7	103.5	104.9
1987	100.0	100.0	102.6	100.0	100.0	100.0	100.0
1988	100.3	101.3	101.3	101.1	100.0	100.9	95.1
1989	92.7	92.9	88.1	95.1	94.9	95.2	92.7
1990	93.0	99.1	87.4	89.2	88.2	88.3	87.8
1991	101.8	104.4	84.1	82.5	80.5	79.7	85.4
1992	112.8	117.5	92.0	81.6	78.3	77.5	82.9
1993	100.9	108.5	86.2	85.4	79.4	74.9	104.9
1994	98.9	109.6	86.6	87.5	79.0	71.4	122.0
1995	95.9	103.7	85.0	88.7	82.0	72.2	131.7
Average annual percent change:							
1984-95	1.9	2.1	1.6	-2	-5	-8	1.0
1980-95	-4	.9	-6	-1	-1.4	-3.7	8.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 135. Lighting fixtures and equipment (SIC 3645, 3646, 3647, 3648): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	81.2	80.9	77.0	94.9	95.2	100.4	81.8
1973	84.1	83.1	83.7	99.5	100.7	107.5	82.4
1974	81.9	79.9	72.0	87.9	90.1	93.8	80.4
1975	80.5	77.9	59.7	74.2	76.7	78.1	73.0
1976	85.6	82.9	69.3	80.9	83.6	87.6	72.5
1977	90.5	88.0	78.0	86.2	88.7	91.1	82.4
1978	91.1	88.4	82.3	90.3	93.1	96.7	83.3
1979	86.2	84.0	83.1	96.4	98.9	101.6	91.2
1980	84.4	82.1	76.7	90.8	93.4	94.2	91.2
1981	80.5	79.1	74.1	92.1	93.7	94.0	93.1
1982	81.6	79.2	69.9	85.6	88.2	88.5	87.3
1983	85.1	83.8	76.6	90.0	91.4	94.2	84.4
1984	91.3	90.1	83.1	91.0	92.2	95.5	83.3
1985	96.7	94.3	86.7	89.3	91.9	94.2	85.9
1986	103.0	101.9	94.3	91.6	92.6	92.7	92.1
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	98.1	98.9	100.7	102.7	101.9	101.8	102.1
1989	97.3	97.3	100.6	103.3	103.3	103.2	103.7
1990	95.0	95.8	94.6	98.6	98.8	98.4	100.0
1991	94.3	94.3	86.6	91.9	91.9	90.9	94.7
1992	98.9	99.5	92.1	93.1	92.5	91.8	94.7
1993	103.7	106.5	98.9	95.3	92.8	93.0	92.1
1994	110.0	113.6	111.1	100.9	97.7	97.5	98.4
1995	107.5	109.7	110.9	103.1	101.1	100.7	102.1
Average annual percent change:							
1983-95	1.8	1.9	3.0	1.1	1.1	.8	1.8
1980-95	2.3	2.7	3.2	.9	.5	.5	.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 136. Household audio and video equipment (SIC 3651): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	19.9	19.7	55.3	278.4	280.1	295.5	228.6
1973	22.3	21.9	65.5	293.3	298.4	317.4	234.0
1974	22.2	21.1	59.8	269.7	263.7	291.3	257.3
1975	24.0	23.3	51.8	215.8	222.9	221.3	225.8
1976	27.2	26.6	61.6	226.6	231.8	227.4	242.2
1977	31.0	30.1	72.8	234.9	241.5	243.8	232.6
1978	34.8	33.5	83.3	239.4	248.4	243.3	262.6
1979	39.1	38.5	85.3	218.3	221.6	216.2	236.8
1980	43.0	42.9	90.2	209.6	210.3	201.8	236.8
1981	50.9	49.8	97.8	192.1	196.1	188.9	218.9
1982	56.5	54.8	85.9	152.2	156.7	149.9	177.9
1983	66.4	68.2	100.0	150.7	146.7	137.6	175.3
1984	84.7	84.7	130.3	153.9	153.8	152.0	158.7
1985	96.3	96.2	140.5	146.0	146.1	142.7	156.0
1986	106.9	107.9	157.1	146.9	145.6	142.7	153.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.2	106.4	106.4	100.2	100.0	100.5	99.0
1989	120.5	118.9	124.8	103.6	105.0	108.0	99.0
1990	124.1	124.7	125.7	101.3	100.8	100.2	101.9
1991	135.7	134.0	132.5	97.6	98.9	95.6	105.3
1992	151.8	151.7	146.6	96.6	96.6	93.2	103.4
1993	163.1	163.6	157.3	96.4	96.1	91.0	106.3
1994	179.3	180.7	174.8	97.5	96.8	92.3	105.8
1995	225.3	224.2	201.8	89.6	90.0	86.0	98.1
Average annual percent change:							
1988-95	9.4	9.4	6.8	-2.4	-2.3	-2.5	-1.9
1990-95	12.7	12.4	9.9	-2.4	-2.2	-3.0	-8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 137. Motor vehicles and equipment (SIC 371): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	67.5	68.8	69.9	103.5	101.6	100.8	103.6
1973	68.7	70.9	80.4	117.0	113.4	112.7	115.5
1974	65.7	63.7	67.2	102.3	105.5	102.7	114.9
1975	70.2	67.4	62.1	88.4	92.1	90.1	99.0
1976	75.1	76.5	78.3	104.3	102.4	102.0	103.5
1977	79.8	83.2	91.1	114.2	109.5	109.0	110.3
1978	79.4	81.7	94.9	119.5	116.2	116.0	115.7
1979	77.7	76.6	87.6	112.7	114.4	113.5	117.3
1980	71.6	68.9	62.8	87.7	91.2	85.3	110.8
1981	73.4	71.8	65.5	89.2	91.2	87.1	105.2
1982	76.7	74.3	60.0	78.2	80.8	76.0	97.2
1983	86.8	88.5	77.1	88.8	87.1	84.4	96.1
1984	91.1	94.4	93.9	103.1	99.5	98.6	102.4
1985	95.3	98.4	100.4	105.3	102.0	101.7	103.0
1986	95.1	96.2	98.9	101.9	100.7	99.5	104.6
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	103.2	105.9	104.8	101.5	98.9	99.2	98.0
1989	103.3	106.1	105.2	101.8	99.1	98.6	101.0
1990	102.4	102.9	96.5	94.3	93.8	91.7	101.1
1991	98.7	96.6	83.0	91.0	91.1	89.4	97.1
1992	104.3	104.4	97.9	93.9	93.8	92.4	98.9
1993	105.4	109.5	105.7	100.3	96.6	95.4	100.9
1994	107.3	115.1	120.9	112.7	105.0	104.6	106.5
1995	104.4	109.9	122.9	117.8	111.8	112.7	108.5
Average annual percent change:							
1988-95	2.8	3.1	4.4	1.5	1.3	1.4	.8
1990-95	.4	1.3	5.0	4.6	3.6	4.2	1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from company records; the American Automobile Manufacturers Association; the Gossups/Times Mirror Company (Automobile Invoice Service); Ward's Communications, Inc. (Ward's Automotive Yearbooks); the Bureau of the Census; the Bureau of Economic Analysis; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics and company records.

**Table 138. Aircraft (SIC 3721): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	66.5	65.1	52.5	78.9	80.6	81.2	72.0
1973	79.2	77.5	65.3	82.5	94.3	95.2	75.5
1974	80.7	79.2	68.3	84.7	86.3	97.0	77.6
1975	80.9	80.5	66.2	81.8	82.2	88.6	77.0
1976	79.1	76.5	61.9	78.3	78.9	83.1	75.5
1977	87.5	87.2	66.2	75.7	75.9	78.2	74.0
1978	92.8	92.8	75.1	80.9	80.9	84.2	78.3
1979	98.6	99.0	92.6	93.9	93.5	104.3	84.8
1980	97.9	97.7	95.7	97.6	98.0	109.2	89.0
1981	99.9	99.1	95.7	95.8	96.6	105.0	89.8
1982	97.6	96.3	86.5	88.6	89.8	90.9	88.8
1983	89.2	87.9	75.2	84.3	81.5	82.7	87.8
1984	84.7	83.8	72.0	85.0	85.9	80.6	90.2
1985	94.2	93.4	85.4	90.7	91.4	85.2	96.4
1986	93.5	93.4	88.8	95.0	95.1	92.1	97.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.8	105.7	109.3	103.3	103.4	101.9	104.6
1989	107.5	106.7	114.4	106.4	107.2	105.2	108.9
1990	112.9	112.6	120.4	106.6	106.9	103.1	109.9
1991	131.4	130.5	130.2	99.1	99.8	95.3	103.4
1992	141.7	140.9	131.3	92.6	93.2	86.6	98.5
1993	142.5	140.7	119.0	83.5	84.6	77.1	90.6
1994	131.8	130.2	99.1	75.2	76.1	67.9	82.7
1995	132.5	130.2	88.9	67.2	68.3	58.8	76.0
Average annual percent change:							
1972-95	3.0	3.1	2.3	-7	-7	-1.9	2
1990-95	3.3	2.9	-5.9	-8.8	-8.6	-10.6	-7.1

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics; the Bureau of

Economic Analysis, U.S. Department of Commerce; the Federal Aviation Administration, U.S. Department of Transportation; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 139. Instruments to measure electricity (SIC 3825): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	59.2	58.9	37.8	63.9	64.2	78.6	48.7
1973	63.7	63.2	44.5	69.9	70.5	88.5	51.4
1974	64.5	62.4	49.7	77.1	79.7	99.2	58
1975	67.2	63.6	45.4	67.6	71.5	85.9	56.2
1976	67.6	65.0	46.6	69.0	71.7	85.9	56.7
1977	71.5	69.1	53.9	75.4	78.0	92.0	63.2
1978	71.7	69.2	62.3	86.8	89.9	103.9	75.1
1979	70.8	69.5	69.0	97.5	99.3	110.1	87.6
1980	76.2	73.1	81.5	107.0	111.4	119.4	103.1
1981	78.1	75.0	83.4	106.8	111.3	114.4	108.0
1982	82.7	78.6	82.7	100.1	105.3	111.4	98.6
1983	86.4	82.2	86.5	100.2	105.3	112.7	97.3
1984	96.2	92.3	103.7	107.8	112.3	120.6	103.8
1985	95.4	91.6	99.3	104.0	108.3	109.9	106.8
1986	90.4	86.7	89.8	99.3	101.2	100.9	101.5
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	106.1	104.1	102.0	98.1	98.0	98.6	99.5
1989	105.2	102.6	97.7	92.8	95.2	93.2	97.3
1990	108.2	103.5	97.4	91.8	94.1	90.2	98.3
1991	108.3	110.3	92.7	85.6	84.0	80.0	88.4
1992	119.0	115.1	92.8	78.0	80.6	73.6	88.1
1993	122.4	118.3	90.1	73.6	76.2	69.5	83.3
1994	144.7	141.8	104.9	72.5	73.9	72.9	75.1
1995	163.6	161.6	117.6	71.9	72.8	70.4	75.3
Average annual percent change:							
1972-95	4.5	4.5	5.1	.5	.5	-.5	1.9
1990-95	9.0	9.3	3.8	-4.8	-5.0	-4.8	-5.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 140. Photographic equipment and supplies (SIC 386): Indexes of output per hour and related measures, 1972-93
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees		
					All employees	Production workers	Nonproduction workers
Index:							
1972	53.5	51.6	56.2	104.9	108.9	128.2	93.8
1973	58.9	56.5	65.5	111.2	115.8	139.5	97.5
1974	62.6	59.1	71.5	114.2	120.8	145.8	101.5
1975	60.9	56.9	64.1	105.3	112.6	129.5	99.5
1976	65.4	62.3	72.3	110.5	116.1	136.7	100.1
1977	66.8	63.9	77.2	115.5	120.8	141.7	104.7
1978	73.8	70.3	86.3	116.9	122.7	143.9	106.1
1979	79.0	76.3	95.0	120.3	124.6	143.9	109.9
1980	72.9	70.5	88.2	120.9	125.0	143.0	111.2
1981	73.1	70.9	90.4	123.6	127.5	144.2	114.5
1982	70.4	68.1	88.6	125.9	130.2	146.2	117.9
1983	80.5	78.7	93.4	116.0	118.6	129.1	110.5
1984	88.2	87.6	100.7	114.2	115.0	126.8	105.9
1985	86.1	85.7	97.7	113.5	113.9	121.8	107.9
1986	94.1	92.8	98.5	104.7	106.2	111.4	102.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.6	105.6	107.1	101.5	101.5	101.5	101.5
1989	113.0	112.4	110.1	97.5	98.0	98.9	97.2
1990	107.8	106.1	98.0	90.9	92.4	92.5	92.3
1991	110.2	109.4	99.9	90.7	91.3	93.6	89.5
1992	116.4	116.7	102.2	87.8	87.6	89.3	86.2
1993	126.9	125.5	106.5	83.9	84.9	84.0	85.6
1994	132.7	132.6	108.7	81.9	82.0	82.5	81.6
1995	129.4	129.2	101.8	78.7	78.8	81.8	76.5
Average annual percent change:							
1987-93	4.4	-1.6	3.8	-6	-7	-1.4	.0
1990-93	3.7	-1.0	8	-2.8	-3.1	-2.4	-3.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 141. Railroad transportation (SIC 4011): Indexes of output per hour and related measures, 1972-93
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	42.1	46.4	91.0	216.1	196.0
1973	46.5	50.3	99.6	214.0	198.1
1974	45.5	49.3	97.8	214.8	198.2
1975	43.3	46.3	84.9	195.9	183.4
1976	46.9	49.7	91.4	194.9	183.9
1977	49.1	52.1	96.4	196.2	185.2
1978	51.6	54.4	98.6	191.2	181.4
1979	54.3	55.3	101.1	186.3	182.7
1980	54.6	54.8	97.3	178.3	177.4
1981	55.1	56.4	95.1	172.5	168.6
1982	58.3	57.1	83.8	143.8	146.7
1983	72.0	70.7	89.2	123.9	126.2
1984	78.0	76.6	97.3	124.7	127.0
1985	81.5	78.5	93.7	115.0	119.3
1986	89.2	83.7	92.9	104.1	111.0
1987	100.0	100.0	100.0	100.0	100.0
1988	108.4	109.8	105.0	96.9	95.6
1989	114.6	113.0	106.6	93.0	94.3
1990	118.5	119.5	107.8	91.0	90.2
1991	127.8	124.7	107.0	83.7	85.8
1992	139.6	134.2	111.4	79.1	83.0
1993	145.6	142.2	114.3	78.7	80.4
Average annual percent change:					
1947-93	5.1	4.4	.3	-4.6	-3.9
1990-93	7.1	6.0	2.0	-4.8	-3.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Surface Transportation Board; the Association of

American Railroads; the Federal Railroad Administration, U.S. Department of Transportation; and the National Railroad Passenger Corporation. Employment and hours based on data from the Surface Transportation Board.

**Table 142. Bus carriers, Class 1 (Parts of SIC 411, 413, 414): Indexes of output per hour and related measures, 1972-89
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	117.5	111.5	171.6	146.0	153.9
1973	116.8	113.5	164.4	140.7	144.8
1974	121.4	118.2	178.3	146.9	150.9
1975	106.9	103.4	160.8	150.4	155.5
1976	103.3	100.3	155.0	150.0	154.5
1977	110.1	105.6	154.0	139.9	145.9
1978	106.5	100.2	146.2	137.2	145.9
1979	108.3	104.1	156.0	144.0	149.9
1980	111.1	99.4	153.8	138.4	154.7
1981	99.9	91.0	141.7	141.8	155.7
1982	108.8	99.2	144.7	133.0	145.8
1983	104.9	98.1	126.9	121.0	129.4
1984	100.1	94.8	120.8	120.7	127.4
1985	96.1	93.1	112.6	117.2	121.0
1986	95.8	95.0	100.1	104.7	105.4
1987	100.0	100.0	100.0	100.0	100.0
1988	107.9	109.2	102.0	94.5	93.4
1989	104.6	106.0	106.0	101.3	100.0
Average annual percent change:					
1984-89	.2	.1	-1.3	-1.5	-1.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Interstate Commerce Commission, the American Bus Association, and the Bureau of Labor Statistics.

**Table 143. Trucking, except local (SIC 4213)¹: Indexes of output per employee and related measures, 1972-89
(1987=100)**

Year	Output per employee	Output	Employees
Index:			
1972	68.1	90.9	133.4
1973	69.5	98.3	141.4
1974	67.2	95.6	142.3
1975	64.2	86.5	134.8
1976	72.2	98.7	136.7
1977	71.9	106.0	147.4
1978	82.9	104.0	125.4
1979	83.9	110.5	131.7
1980	77.5	93.6	120.8
1981	83.6	92.4	110.5
1982	77.7	87.0	112.0
1983	94.3	93.6	99.3
1984	97.3	105.7	108.6
1985	93.8	94.8	101.1
1986	96.8	97.7	100.9
1987	100.0	100.0	100.0
1988	105.2	100.8	95.8
1989	109.4	102.8	94.0
Average annual percent change:			
1984-89	2.8	3.7	.8

¹ Class I and II common and contract carriers.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Based on data from the Interstate Commerce Commission; Trinc Transportation Consultants, a division of Dunn and Bradstreet, Inc.; and the American Trucking Associations.

**Table 144. Trucking, except local, general freight (SIC 4213 part)¹: Indexes of output per employee and related measures, 1972-89
(1987=100)**

Year	Output per employee	Output	Employees
Index:			
1972	59.4	96.1	161.8
1973	63.4	106.8	166.5
1974	64.4	104.7	162.5
1975	61.0	90.9	148.9
1976	66.3	103.5	156.0
1977	69.0	112.7	163.3
1978	80.5	111.8	138.8
1979	80.4	115.4	143.5
1980	74.2	95.4	128.5
1981	81.0	96.1	118.6
1982	74.4	87.7	117.9
1983	93.8	94.9	101.2
1984	95.1	105.3	110.7
1985	91.0	95.1	104.5
1986	97.4	104.6	107.4
1987	100.0	100.0	100.0
1988	107.7	103.2	95.8
1989	106.1	102.5	94.8
Average annual percent change:			
1954-89	2.9	2.8	.1

¹ Class I and II common and contract carriers.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Based on data from the Interstate Commerce Commission; Tricor Transportation Consultants, a division of Dunn and Bradstreet, Inc.; and the American Trucking Associations.

**Table 145. United States Postal Service (SIC 43): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output	Employee hours
Index:			
1972	83.6	73.5	87.9
1973	86.6	75.3	85.0
1974	86.2	75.4	87.4
1975	86.1	74.2	86.1
1976	86.4	73.4	84.9
1977	90.2	74.8	82.9
1978	93.0	76.5	82.2
1979	91.9	76.8	83.6
1980	94.8	79.9	84.4
1981	96.0	81.1	84.5
1982	96.5	81.5	84.5
1983	96.9	82.9	85.6
1984	98.1	88.4	90.1
1985	98.4	92.4	93.9
1986	100.0	96.7	96.7
1987	100.0	100.0	100.0
1988	99.9	102.9	103.1
1989	99.7	103.4	103.7
1990	104.0	107.1	103.0
1991	103.7	106.9	103.1
1992	104.5	107.2	102.6
1993	107.1	110.0	102.7
1994	106.6	113.6	106.5
1995	106.5	115.1	106.1
Average annual percent change:			
1987-95	1.0	1.9	.9
1990-95	.5	1.5	1.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output and hours based on data from the United States Postal Service. Employee hours in SIC 43 are based on the number of full-time equivalent (FTE)

employee years, as reported in the U.S. Postal Service budget. FTE employee years are computed by dividing hours of full-time, part-time, and intermittent workers by the number of hours in a standard work year. The output and the hours indexes reflect the Federal fiscal year.

**Table 146. Air transportation (SIC 4512, 4513, 4522 part): Indexes of output per employee and related measures, 1972-95
(1967=100)**

Year	Output per employee	Output	Employees
Index:			
1972	53.3	39.4	73.9
1973	54.3	41.8	76.9
1974	55.0	41.9	76.1
1975	55.6	41.6	74.9
1976	60.5	45.8	75.7
1977	63.3	49.2	77.7
1978	69.4	56.1	80.9
1979	75.5	65.0	86.1
1980	70.8	62.6	88.5
1981	70.4	61.3	87.1
1982	77.7	64.0	82.4
1983	85.5	69.2	81.0
1984	88.8	75.2	84.7
1985	92.0	81.9	89.0
1986	93.8	90.0	95.9
1987	100.0	100.0	100.0
1988	99.5	105.1	105.6
1989	95.8	108.4	113.1
1990	92.9	113.3	122.0
1991	92.5	111.1	120.1
1992	96.9	118.4	122.2
1993	100.2	122.5	122.2
1994	105.8	131.1	124.0
1995	108.4	136.8	126.3
Average annual percent change:			
1947-95	5.7	9.4	3.6
1990-95	3.1	3.8	.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Based on data from the Research and Special Programs Administration, Office of Airline Statistics, U.S. Department of Transportation.

**Table 147. Petroleum pipelines (SIC 4512, 4613): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees	
					All employees	Nonsupervisory workers
Index:						
1972	88.4	86.8	77.2	87.3	86.9	95.6
1973	93.2	91.9	82.2	88.2	89.4	95.6
1974	90.6	89.2	82.1	90.6	92.0	98.5
1975	91.1	88.6	82.5	90.6	93.1	97.1
1976	90.7	90.2	84.8	93.5	94.1	96.2
1977	95.1	95.1	93.5	98.3	98.3	99.2
1978	96.6	96.1	100.1	103.6	104.2	103.6
1979	96.9	97.4	104.1	107.5	106.9	104.3
1980	88.6	86.8	100.6	113.6	113.3	110.9
1981	82.1	83.7	97.0	118.2	115.9	111.7
1982	84.3	85.7	97.1	115.2	113.3	107.3
1983	89.7	89.4	95.6	106.5	106.9	102.9
1984	99.4	96.2	97.7	98.3	101.6	98.5
1985	99.9	98.4	97.7	97.8	99.3	97.9
1986	102.0	102.6	99.1	97.2	96.6	97.1
1987	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.8	102.0	103.3	98.6	98.4	93.2
1989	103.2	101.9	100.3	97.2	98.4	96.4
1990	102.5	102.0	100.4	97.9	98.4	99.3
1991	99.0	98.3	99.4	100.3	101.1	102.9
1992	100.2	99.0	101.1	100.9	102.1	105.8
1993	104.4	104.4	102.2	97.9	97.9	103.6
1994	108.1	112.3	102.1	94.4	91.0	97.1
1995	117.7	123.0	97.5	82.8	79.3	86.9
Average annual percent change:						
1958-95	4.3	4.5	2.9	-1.3	-1.5	-1.7
1990-95	2.8	3.8	-6	-3.3	-4.2	-2.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Oil and Gas Journal, Penn Well Publishing Company; the American Petroleum Institute; the Association of Oil

Pipe Lines; and the Interstate Commerce Commission. Employment and hours based on data from the Bureau of Labor Statistics and the Interstate Commerce Commission.

**Table 148. Telephone communications (SIC 481): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	40.1	38.3	40.6	101.1	105.9
1973	42.7	41.0	44.5	104.5	108.9
1974	45.0	43.3	48.0	106.7	110.9
1975	49.3	46.5	49.8	101.0	107.2
1976	53.6	50.4	53.2	98.4	105.6
1977	57.3	55.2	58.6	102.2	106.1
1978	60.6	58.8	64.9	107.0	110.3
1979	63.5	61.6	71.5	112.6	116.2
1980	67.6	65.6	78.0	115.4	118.8
1981	71.1	69.0	82.3	115.7	119.3
1982	75.8	70.9	84.3	114.2	118.8
1983	84.6	81.6	86.5	102.2	106.0
1984	84.5	82.5	87.2	103.2	105.7
1985	88.9	88.2	90.0	101.3	102.1
1986	95.0	95.0	93.0	97.9	97.9
1987	100.0	100.0	100.0	100.0	100.0
1988	106.2	105.9	105.8	99.7	99.9
1989	111.6	110.3	108.3	97.0	98.2
1990	113.3	111.9	113.3	100.0	101.2
1991	119.8	117.5	118.4	98.9	100.8
1992	127.7	126.1	123.8	97.0	98.1
1993	135.2	134.2	130.8	96.8	97.5
1994	141.8	140.9	139.6	98.6	99.1
1995	144.6	144.6	140.7	101.4	101.4
Average annual percent change:					
1951-95	5.8	6.0	6.8	9	8
1980-95	5.0	5.3	5.3	3	0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

SOURCE: Output based on data from the Federal Communications Commission, the

**Table 149. Gas and electric utilities (SIC 491, 492, 493): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees	
					All employees	Nonsupervisory workers
Index:						
1972	104.1	104.3	83.9	80.6	80.4	87.2
1973	105.3	106.2	87.4	83.0	82.3	88.8
1974	103.3	103.4	86.7	83.9	83.8	89.8
1975	107.0	106.0	87.2	81.5	82.3	87.7
1976	109.9	109.0	89.8	81.8	82.4	87.1
1977	111.4	110.9	92.9	83.3	83.7	87.8
1978	109.3	110.3	95.1	87.9	87.1	90.3
1979	108.0	109.7	96.0	90.8	90.2	93.5
1980	107.2	108.1	100.1	93.4	92.6	96.1
1981	105.2	105.2	100.5	95.5	95.5	99.0
1982	98.8	99.0	97.2	98.3	98.1	100.7
1983	98.3	98.3	95.3	99.0	99.0	100.5
1984	99.5	99.7	99.8	100.3	100.1	100.8
1985	98.0	98.6	99.8	101.9	101.2	101.9
1986	97.0	97.6	98.5	101.5	100.9	101.4
1987	100.0	100.0	100.0	100.0	100.0	100.0
1988	105.0	105.3	104.5	99.5	99.3	99.0
1989	106.6	106.1	106.5	99.9	98.5	98.1
1990	106.2	106.9	106.5	100.2	99.6	99.5
1991	108.5	108.1	108.0	98.6	99.0	98.8
1992	110.1	111.3	108.6	98.7	97.6	98.7
1993	117.2	119.5	114.0	97.2	95.4	94.3
1994	120.5	123.6	114.1	94.7	92.3	91.5
1995	127.7	130.7	116.1	91.0	88.9	87.9
Average annual percent change:						
1947-95	3.8	3.8	4.8	.9	.9	.8
1980-95	3.8	4.1	1.7	-1.9	-2.2	-2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

Information Administration, U.S. Department of Energy; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

SOURCE: Output based on data from the American Gas Association; the Rural Electrification Administration, U.S. Department of Agriculture; the Energy

Table 150. Electric utilities (SIC 491, 493 part): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	85.5	86.0	63.4	74.1	73.7
1973	88.4	89.7	68.4	77.4	78.3
1974	87.1	87.5	68.4	78.5	78.1
1975	92.5	91.6	70.5	76.2	76.9
1976	95.4	95.0	73.6	77.1	77.5
1977	99.7	99.5	78.6	78.8	79.0
1978	96.6	96.1	81.5	84.4	83.1
1979	95.2	96.5	83.6	87.7	86.6
1980	93.7	95.1	85.2	90.9	89.6
1981	92.8	93.0	85.9	92.6	92.4
1982	89.2	89.8	85.0	95.3	94.8
1983	90.4	90.8	87.2	96.5	96.2
1984	93.8	94.1	92.3	98.4	98.1
1985	93.0	93.9	94.1	101.2	100.2
1986	95.3	96.1	96.5	101.3	100.4
1987	100.0	100.0	100.0	100.0	100.0
1988	104.9	105.1	104.9	100.0	99.8
1989	107.7	109.0	107.7	100.0	98.8
1990	110.1	110.4	110.0	99.9	99.7
1991	113.4	113.4	112.5	99.2	99.2
1992	115.2	115.9	112.3	97.4	96.9
1993	120.6	122.5	117.2	97.2	95.7
1994	126.8	129.5	119.8	94.5	92.5
1995	135.0	137.9	123.2	91.3	89.4
Average annual percent change:					
1958-95	3.8	3.5	4.9	1.0	1.0
1980-95	4.2	4.5	2.3	-1.8	-2.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Rural Electrification Administration, U.S.

Department of Agriculture, and the Energy Information Administration, U.S. Department of Energy. Employment and hours based on data from the Bureau of Labor Statistics.

Table 151. Gas utilities (SIC 492, 493 part): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	149.6	149.3	149.6	100.0	100.2
1973	145.5	145.0	145.2	99.8	100.1
1974	141.9	141.0	141.9	100.0	100.6
1975	139.3	138.1	135.6	97.4	98.2
1976	142.2	140.5	136.1	95.7	96.8
1977	136.6	135.4	132.2	96.8	97.6
1978	138.4	137.4	136.1	96.3	99.0
1979	141.4	140.1	141.4	100.0	100.9
1980	135.9	138.8	140.9	100.7	101.5
1981	134.7	133.9	140.1	104.0	104.7
1982	121.5	120.8	130.4	107.3	107.9
1983	110.8	110.3	118.1	106.6	107.1
1984	114.1	114.2	121.0	106.1	106.9
1985	111.9	111.5	116.2	103.9	104.2
1986	102.1	102.3	104.5	102.4	102.1
1987	100.0	100.0	100.0	100.0	100.0
1988	105.5	105.7	103.3	98.0	97.8
1989	103.5	105.6	103.0	99.5	97.5
1990	94.8	95.7	96.1	101.3	99.3
1991	94.0	95.4	94.9	100.9	98.5
1992	95.3	97.9	97.6	102.4	99.7
1993	107.0	110.4	104.2	97.4	94.4
1994	102.2	106.2	97.5	95.4	91.8
1995	105.9	109.2	95.3	90.0	87.3
Average annual percent change:					
1958-95	.8	1.0	.7	-1	-3
1980-95	2.2	2.5	-2	-2.3	-2.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the American Gas Association. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 152. Scrap and waste materials (SIC 5093): Indexes of output per hour and related measures, 1977-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1977	73.5	73.0	74.6	101.5	102.2
1978	81.3	81.1	81.1	99.8	100.1
1979	81.1	81.1	89.7	115.5	115.6
1980	79.2	77.5	86.3	108.9	111.3
1981	76.6	76.1	81.3	106.2	106.8
1982	75.1	73.1	88.4	91.1	93.6
1983	80.1	80.3	78.0	96.6	97.4
1984	89.1	88.2	84.9	95.3	96.3
1985	93.4	91.8	87.5	92.7	95.5
1986	97.7	97.2	91.8	94.0	94.5
1987	100.0	100.0	100.0	100.0	100.0
1988	95.4	96.5	106.7	113.9	112.7
1989	86.0	86.8	107.8	125.4	121.6
1990	98.6	99.5	111.8	113.4	112.2
1991	98.9	98.9	110.5	111.8	111.8
1992	101.7	105.9	117.1	115.2	112.7
1993	106.4	111.2	125.2	114.4	112.6
1994	107.7	116.8	137.7	127.9	117.9
1995	108.9	115.0	146.5	136.4	129.2
Average annual percent change:					
1977-95	2.2	2.6	3.9	1.7	1.3
1990-95	2.0	2.9	5.8	3.8	2.9

¹ All persons include paid employees and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the U.S. Geological Survey, U.S. Department of the Interior, and the American Paper Institute. Persons and hours based on data from the Bureau of Labor Statistics.

**Table 153. Hardware stores (SIC 525): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	85.2	90.1	74.3	87.2	82.5
1973	83.3	87.3	73.5	88.3	84.2
1974	80.1	83.6	72.5	90.5	86.8
1975	82.4	85.7	75.3	91.4	87.9
1976	80.7	86.8	77.4	95.9	89.2
1977	84.7	87.8	82.0	96.8	93.4
1978	85.0	88.9	85.4	100.5	96.0
1979	97.5	98.5	95.4	97.9	96.9
1980	94.9	94.7	92.5	97.5	97.7
1981	91.4	91.1	87.5	95.7	96.1
1982	93.0	92.6	85.5	91.9	92.3
1983	91.5	91.1	87.4	95.5	95.9
1984	96.5	96.2	96.0	101.4	101.8
1985	95.6	94.3	97.0	101.4	102.8
1986	101.8	99.7	99.6	98.1	99.9
1987	100.0	100.0	100.0	100.0	100.0
1988	108.6	105.8	105.5	97.1	99.7
1989	115.2	111.5	110.5	95.9	99.1
1990	110.4	107.4	107.3	97.2	96.6
1991	102.5	100.3	100.9	96.5	100.6
1992	107.2	106.0	104.4	97.4	96.5
1993	106.7	103.8	105.9	100.3	103.0
1994	114.5	113.1	113.2	98.9	100.1
1995	106.4	104.1	106.4	101.9	104.2
Average annual percent change:					
1972-95	1.0	.6	1.7	.7	1.0
1990-95	-.7	-.6	.2	.9	.8

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 154. Department stores (SIC 531): Indexes of output per hour and related measures, 1972-95
(1967=100)

Year	Output per employee-hour	Output per employee	Output	Employee hours	Employees
1972					
1972	98.4	98.9	98.7	97.0	94.7
1973	90.8	90.1	90.8	100.0	97.9
1974	90.2	90.0	90.3	98.4	97.5
1975	93.7	93.9	93.8	93.8	94.1
1976	97.1	97.5	97.7	94.3	96.0
1977	71.1	76.4	67.9	95.5	95.8
1978	73.1	77.0	72.2	96.9	93.8
1979	74.0	78.3	73.0	96.8	93.2
1980					
1980	72.6	77.0	71.8	97.2	93.0
1981	77.9	81.5	75.8	97.3	92.0
1982	79.8	82.3	78.2	95.8	91.3
1983	85.0	89.2	81.2	95.5	91.0
1984	90.4	93.3	89.1	95.8	95.3
1985	92.8	94.5	91.4	96.9	96.8
1986	97.4	98.1	96.5	99.1	98.4
1987	100.0	100.0	100.0	100.0	100.0
1988	99.2	99.0	101.6	102.4	102.6
1989	98.9	97.0	104.8	108.1	108.0
1990	94.2	95.2	104.4	110.8	106.7
1991	98.2	100.1	105.9	107.8	104.8
1992	101.2	105.8	112.1	110.8	106.1
1993	106.0	108.3	119.3	113.7	109.2
1994	107.1	113.0	129.5	120.8	114.6
1995	107.6	114.2	136.9	127.2	119.8
Average annual percent change:					
1987-95	.2	.2	-1.1	1.7	2.0
1990-95	1.0	1.0	-0.1	2.8	1.8

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 155. Variety stores (SIC 533): Indexes of output per hour and related measures, 1972-95
(1967=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
1972					
1972	155.0	166.2	209.8	135.4	126.3
1973	148.9	157.7	207.7	139.5	131.7
1974	147.4	152.4	187.8	134.1	129.7
1975	151.6	159.9	187.7	123.8	117.4
1976	152.1	156.8	180.3	121.3	117.3
1977	122.3	123.1	147.5	120.8	119.8
1978	122.1	120.4	144.4	118.2	119.8
1979	123.5	129.4	148.8	118.1	117.1
1980					
1980	122.6	129.4	136.0	105.8	105.1
1981	140.5	136.6	134.2	95.5	98.8
1982	132.6	133.4	128.2	98.7	96.1
1983	139.2	141.8	127.2	91.4	92.7
1984	141.9	143.3	130.2	91.7	92.8
1985	129.2	129.5	124.0	95.9	95.7
1986	106.7	107.2	107.8	101.0	100.8
1987	100.0	100.0	100.0	100.0	100.0
1988	101.9	101.3	100.7	98.8	99.4
1989	124.5	119.7	103.5	83.2	86.5
1990	151.3	147.6	104.1	68.8	70.4
1991	154.3	148.8	101.5	68.8	65.2
1992	167.7	165.0	113.8	67.8	66.8
1993	170.4	163.8	106.7	62.7	65.1
1994	180.5	158.2	94.4	59.1	60.0
1995	158.3	155.8	86.8	55.7	57.0
Average annual percent change:					
1987-95	.5	.2	-2.8	-5.0	-2.7
1990-95	1.0	1.0	-0.1	-4.1	-4.1

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 156. Food stores (SIC 54): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	113.8	129.2	86.1	75.8	67.2
1973	109.0	122.8	83.8	76.9	68.3
1974	104.4	115.8	82.1	78.6	71.0
1975	106.1	115.4	83.4	78.8	72.3
1976	108.2	116.9	87.2	80.6	73.3
1977	107.1	116.4	87.1	81.3	74.8
1978	103.2	111.4	86.0	85.3	79.0
1979	105.4	111.8	86.3	85.7	80.7
1980	107.6	111.2	92.3	85.8	83.0
1981	104.6	107.7	92.0	87.9	85.4
1982	103.3	106.1	92.3	89.4	87.0
1983	103.1	105.5	93.9	91.1	89.0
1984	103.7	105.3	96.1	92.7	91.3
1985	104.1	104.0	98.4	94.5	94.6
1986	103.1	102.2	98.8	98.8	97.7
1987	100.0	100.0	100.0	100.0	100.0
1988	98.0	98.2	99.9	99.9	102.7
1989	96.0	94.9	99.9	100.1	106.3
1990	96.0	94.2	90.3	92.4	107.4
1991	94.9	92.7	95.3	104.6	107.2
1992	94.5	92.9	95.5	104.3	106.1
1993	93.3	91.8	98.6	105.6	107.4
1994	93.0	91.2	98.8	107.1	106.2
1995	91.4	89.8	99.4	108.8	110.9
Average annual percent change:					
1980-90	-5	-3	1.5	1.0	1.8
1990-95	-1.0	-1.0	-4	-6	-6

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of

Economic Analysis, U.S. Department of Commerce; the Bureau of Labor Statistics; and the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Table 157. Grocery stores (SIC 541): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	113.4	128.2	85.3	75.2	66.5
1973	105.1	123.2	83.0	76.1	67.4
1974	104.7	115.9	81.3	77.8	70.1
1975	106.5	116.1	82.9	77.8	71.4
1976	108.6	126.1	86.7	79.8	72.2
1977	107.8	117.9	96.8	80.4	73.8
1978	104.6	117.8	87.5	83.7	79.1
1979	105.8	113.7	89.9	84.2	79.1
1980	106.2	102.1	91.6	84.7	81.8
1981	105.9	116.9	91.3	86.2	83.8
1982	106.1	102.8	92.0	86.7	84.9
1983	106.6	106.2	93.7	87.9	86.6
1984	107.9	108.9	96.4	89.3	88.5
1985	105.7	105.9	98.9	93.6	83.5
1986	103.8	102.0	100.4	96.7	87.4
1987	100.0	107.0	100.0	100.0	100.0
1988	98.0	96.1	101.2	102.4	103.2
1989	95.4	94.3	101.4	106.3	107.5
1990	94.6	92.9	101.8	107.8	109.7
1991	93.7	91.4	99.9	106.6	109.3
1992	93.3	91.9	99.5	106.6	106.2
1993	90.7	91.0	99.5	107.3	106.3
1994	90.2	90.8	100.4	108.9	110.9
1995	91.1	89.3	100.2	106.6	112.1
Average annual percent change:					
1972-90	-9	-1.8	.7	1.7	2.5
1990-95	-7	-1.0	-3	-4	-4

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of the Census; the Bureau of Labor Statistics; and the Internal Revenue Service, U.S. Department of the Treasury.

Table 158. Retail bakeries (SIC 545): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
<i>Index:</i>					
1972	126.6	126.4	88.4	69.8	64.8
1973	125.8	126.2	88.5	70.5	65.0
1974	116.8	120.5	85.7	73.4	64.7
1975	105.5	111.7	71.8	66.1	64.3
1976	114.0	117.3	77.5	65.0	66.1
1977	112.7	118.9	81.8	72.6	70.0
1978	112.2	115.3	84.3	75.1	73.1
1979	112.3	117.4	90.2	80.3	76.8
1980	117.3	122.0	92.8	79.1	76.0
1981	112.4	115.2	86.0	78.3	76.4
1982	104.6	106.8	86.3	82.5	80.9
1983	104.8	104.8	85.8	81.8	81.8
1984	96.0	96.1	85.0	88.5	85.8
1985	87.8	89.1	79.5	80.8	88.3
1986	95.8	94.1	87.0	89.0	88.3
1987	100.0	100.0	100.0	100.0	100.0
1988	88.8	90.7	91.0	101.3	100.4
1989	83.3	83.5	81.1	97.3	97.1
1990	89.7	91.2	82.6	93.3	91.8
1991	94.7	94.6	84.7	89.4	89.5
1992	94.0	93.2	85.0	90.5	91.3
1993	85.8	86.5	81.9	85.8	94.7
1994	85.8	86.5	84.5	88.8	97.7
1995	84.8	84.8	87.0	102.8	102.5
Average annual percent change:					
1972-95	-1.7	-2.0	-1	1.7	2.0
1980-95	-1.2	-1.4	-1	2.0	2.3

¹ All persons include paid employees, unpaid family workers, and the self-employed.
NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the Internal Revenue Service, U.S. Department of the Treasury.

Table 159. New and used car dealers (SIC 551): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
<i>Index:</i>					
1972	83.9	90.8	78.2	90.8	83.9
1973	85.1	91.5	79.4	93.3	86.8
1974	82.4	87.9	71.8	86.8	81.3
1975	83.9	89.4	70.8	84.1	79.6
1976	87.1	92.4	77.0	88.4	83.3
1977	86.3	92.8	80.3	90.9	86.7
1978	86.0	91.6	83.2	94.0	90.8
1979	86.3	89.6	80.9	93.7	90.3
1980	87.9	90.3	72.8	82.8	80.8
1981	86.2	89.2	68.2	78.6	78.5
1982	88.8	90.4	67.9	76.5	75.1
1983	97.6	99.1	77.4	79.3	78.1
1984	99.5	101.2	86.9	87.3	85.9
1985	99.8	101.2	93.7	83.9	80.6
1986	101.6	102.1	98.8	87.2	86.8
1987	102.0	100.0	100.0	100.0	100.0
1988	103.5	103.5	107.2	103.8	103.6
1989	102.5	101.7	104.8	102.3	102.1
1990	106.1	105.8	105.8	99.7	100.0
1991	104.2	103.8	98.7	94.8	95.1
1992	106.5	106.8	101.1	94.0	94.7
1993	107.1	107.7	106.8	98.5	98.2
1994	106.3	107.7	112.1	103.5	104.1
1995	107.1	105.8	113.7	106.2	107.7
Average annual percent change:					
1980-95	1.8	1.3	2.7	.9	1.4
1990-95	2	0	1.5	1.3	1.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

NOTE: Output based on data from the Bureau of the Census, the Bureau of Labor

Statistics, the National Automobile Dealers Association, and Ward's Communications, Inc. (Ward's Automotive Yearbooks). Employment and hours based on data from the Bureau of Labor Statistics.

**Table 160. Auto and home supply stores (SIC 553): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	68.3	74.8	46.4	68.0	62.1
1973	71.1	77.7	52.5	73.8	67.6
1974	66.6	72.1	51.3	77.1	71.2
1975	70.3	75.1	54.8	78.0	73.0
1976	70.5	75.2	57.6	81.7	76.6
1977	77.6	83.2	66.7	86.0	80.2
1978	80.7	82.9	69.5	86.1	83.9
1979	80.1	82.3	72.4	90.4	88.0
1980	82.8	85.3	71.8	86.7	84.2
1981	84.7	86.9	73.8	87.1	84.9
1982	83.3	85.7	73.4	88.1	85.6
1983	91.7	92.5	82.0	89.4	88.6
1984	90.4	92.7	88.8	98.2	95.8
1985	94.5	96.5	96.0	101.6	99.5
1986	94.3	95.6	95.5	101.2	99.9
1987	100.0	100.0	100.0	100.0	100.0
1988	103.2	102.9	107.9	104.6	104.9
1989	101.5	99.9	105.8	104.2	105.9
1990	102.8	101.7	105.2	106.3	107.4
1991	98.9	96.2	103.2	104.3	105.1
1992	100.0	98.4	102.6	102.6	104.3
1993	98.9	98.2	106.9	108.0	108.9
1994	103.0	101.7	114.2	110.8	112.2
1995	106.8	104.1	118.9	111.3	114.2
Average annual percent change:					
1972-95	2.0	1.4	4.2	2.2	2.7
1990-95	.8	.5	1.7	.9	1.2

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 161. Gasoline service stations (SIC 554): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	55.5	66.9	88.3	159.2	132.0
1973	59.5	69.0	89.9	151.1	130.2
1974	59.6	68.2	79.7	133.7	117.0
1975	58.5	67.2	82.0	140.1	121.9
1976	64.4	71.3	85.6	132.8	120.0
1977	66.6	74.6	88.0	128.3	117.9
1978	70.7	76.5	89.0	125.9	116.4
1979	73.7	77.7	83.2	113.0	107.1
1980	72.1	76.1	78.6	108.1	103.4
1981	73.3	77.1	77.7	106.0	100.7
1982	76.9	79.8	76.7	99.7	96.0
1983	84.1	86.6	83.0	98.7	95.8
1984	87.0	89.7	87.8	100.9	97.9
1985	93.5	94.4	91.5	97.9	97.0
1986	101.8	103.1	101.2	99.4	98.2
1987	100.0	100.0	100.0	100.0	100.0
1988	103.0	102.5	103.6	100.6	101.1
1989	105.1	103.3	106.0	100.8	102.6
1990	102.6	101.3	105.8	103.1	104.5
1991	104.3	107.9	105.3	101.0	102.3
1992	109.7	106.3	104.7	95.5	98.5
1993	112.4	109.1	106.1	94.4	97.3
1994	115.0	110.5	108.7	94.6	98.4
1995	119.2	112.0	111.2	93.3	99.3
Average annual percent change:					
1988-95	3.5	2.5	2.3	-1.1	-2
1990-95	3.0	2.0	1.0	-2.0	-1.0

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 162. Apparel and accessory stores (SIC 56): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	64.3	71.2	49.8	77.4	69.9
1973	70.2	77.6	55.1	78.5	71.0
1974	69.3	76.3	53.9	77.7	70.6
1975	74.0	80.7	56.4	76.3	69.9
1976	72.5	78.8	58.8	81.2	74.7
1977	71.2	76.8	60.0	84.3	78.2
1978	77.5	82.7	67.2	86.8	81.3
1979	79.1	83.5	70.4	89.0	84.3
1980	82.4	85.8	72.6	88.1	84.6
1981	86.7	90.0	77.2	89.0	85.8
1982	88.9	91.9	77.9	87.5	84.7
1983	93.5	96.1	83.2	88.9	86.5
1984	98.3	100.7	88.2	89.7	87.6
1985	101.3	102.5	92.9	91.7	90.6
1986	106.3	106.1	100.0	94.0	94.2
1987	100.0	100.0	100.0	100.0	100.0
1988	100.5	100.7	103.3	102.8	102.6
1989	102.1	102.9	109.3	107.0	106.2
1990	101.7	102.9	108.8	107.0	105.7
1991	102.7	103.7	106.8	104.0	103.0
1992	109.3	110.4	111.6	102.1	101.2
1993	110.1	110.4	113.4	103.0	102.7
1994	113.8	114.7	116.9	102.7	101.9
1995	121.8	120.9	119.0	97.7	98.5
Average annual percent change:					
1987-95	2.8	2.2	3.8	1.0	1.6
1990-95	3.7	3.3	1.8	-1.8	-1.4

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 163. Men's and boys' clothing stores (SIC 561): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	72.8	79.7	101.0	138.8	126.8
1973	77.6	84.5	105.7	136.2	125.0
1974	73.3	78.9	98.0	133.7	124.2
1975	76.8	83.1	100.6	130.9	121.0
1976	73.1	78.5	99.8	136.6	127.2
1977	76.2	81.2	102.8	134.9	126.6
1978	80.5	85.1	108.4	134.7	127.4
1979	82.3	86.6	109.8	133.4	126.8
1980	80.8	85.0	103.9	128.5	122.2
1981	87.5	90.5	102.1	116.7	112.9
1982	87.3	89.6	97.5	111.6	108.8
1983	89.4	91.1	97.2	108.7	106.8
1984	93.7	95.0	98.5	105.1	103.7
1985	98.2	98.2	98.7	100.4	100.5
1986	100.7	100.8	99.5	98.8	98.7
1987	100.0	100.0	100.0	100.0	100.0
1988	106.0	104.5	104.6	98.7	100.1
1989	109.3	107.5	107.9	98.7	100.3
1990	112.8	110.2	103.6	91.8	94.0
1991	117.7	115.0	100.0	85.0	87.0
1992	116.4	114.6	96.2	82.6	83.9
1993	115.7	115.9	96.1	83.1	82.9
1994	120.9	121.0	100.2	82.8	82.8
1995	122.6	121.8	95.4	77.8	78.4
Average annual percent change:					
1987-95	2.5	2.0	.8	-1.6	-1.2
1990-95	1.7	2.0	-1.6	-3.3	-3.6

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 164. Women's clothing stores (SIC 562): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	53.9	61.0	45.2	83.9	74.2
1973	58.9	66.0	50.1	85.1	75.9
1974	60.3	66.8	50.3	83.4	75.2
1975	66.5	73.5	55.1	82.9	75.0
1976	65.4	72.6	58.4	89.2	80.4
1977	62.9	68.7	57.5	91.3	83.6
1978	70.2	75.1	65.5	93.3	87.1
1979	72.8	76.7	68.4	94.0	89.2
1980	74.3	77.2	68.9	92.7	89.2
1981	80.7	83.8	74.1	91.8	88.4
1982	89.9	92.6	78.1	86.8	84.3
1983	94.8	98.2	84.5	89.1	86.0
1984	98.0	101.5	89.9	91.7	88.6
1985	99.8	101.9	95.3	95.5	93.5
1986	107.0	106.9	104.0	97.2	97.3
1987	100.0	100.0	100.0	100.0	100.0
1988	97.5	96.8	99.7	102.2	103.0
1989	99.1	97.7	104.5	105.4	107.0
1990	100.8	98.0	101.7	100.9	103.8
1991	101.9	99.7	98.4	96.6	98.7
1992	110.7	108.7	102.8	92.8	94.5
1993	116.2	113.4	104.6	90.0	92.2
1994	118.1	117.0	102.3	86.7	87.5
1995	122.9	120.1	101.7	82.8	84.7
Average annual percent change:					
1987-95	3.7	2.9	3.8	1	.9
1990-95	4.0	4.2	.0	-3.9	-4.0

¹ All persons include paid employees, unpaid family workers, and the self-employed.
NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 165. Family clothing stores (SIC 565): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	65.8	73.8	35.9	54.5	48.6
1973	76.2	83.9	41.5	54.5	49.5
1974	75.2	82.5	42.0	55.8	50.9
1975	76.8	83.9	43.4	56.6	51.8
1976	75.4	82.1	45.7	60.6	55.7
1977	69.7	76.2	48.5	69.6	63.7
1978	70.0	76.2	50.9	72.6	66.7
1979	75.4	79.5	54.4	72.1	68.4
1980	86.3	88.2	60.2	69.8	68.3
1981	92.5	95.5	65.7	71.0	68.8
1982	98.4	102.6	71.3	72.5	69.5
1983	106.4	109.2	76.8	74.1	72.2
1984	106.2	108.9	83.5	78.7	76.7
1985	103.1	104.3	87.1	84.5	83.5
1986	103.3	103.6	93.8	90.8	90.5
1987	100.0	100.0	100.0	100.0	100.0
1988	102.4	101.9	107.0	104.5	105.0
1989	105.5	105.3	115.3	109.3	109.5
1990	104.9	106.2	119.1	113.5	112.1
1991	106.9	108.6	123.5	115.5	113.7
1992	112.3	114.8	131.4	117.1	114.5
1993	111.6	113.5	136.7	122.4	120.4
1994	114.9	116.7	146.1	127.2	125.2
1995	128.4	128.3	154.9	120.6	120.7
Average annual percent change:					
1987-95	3.3	2.6	6.3	2.9	3.5
1990-95	4.1	3.9	5.4	1.2	1.5

¹ All persons include paid employees, unpaid family workers, and the self-employed.
NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

Table 166. Shoe stores (SIC 566): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	76.5	81.3	58.5	76.4	71.9
1973	81.3	87.3	63.7	78.4	73.0
1974	71.4	77.2	58.0	81.2	75.1
1975	77.0	81.3	59.1	76.7	72.7
1976	78.7	83.1	61.8	78.5	74.3
1977	80.8	85.2	66.3	82.1	77.8
1978	88.5	92.5	74.7	84.4	80.8
1979	90.9	94.1	81.0	89.1	86.1
1980	88.7	91.3	82.2	92.6	90.0
1981	91.9	94.1	87.7	95.5	93.2
1982	88.6	89.6	82.3	92.9	91.9
1983	87.4	88.8	85.7	98.0	96.5
1984	90.6	90.9	87.3	96.4	96.0
1985	97.6	97.1	91.5	93.8	94.3
1986	105.5	104.9	98.4	93.3	93.8
1987	100.0	100.0	100.0	100.0	100.0
1988	102.7	103.2	101.4	98.7	98.2
1989	107.2	109.4	109.2	101.9	99.8
1990	106.2	112.7	111.3	104.8	98.7
1991	105.1	111.3	104.6	99.5	94.0
1992	111.5	113.6	104.6	93.9	92.1
1993	110.8	110.1	104.3	94.1	94.7
1994	120.5	118.1	107.5	89.2	91.0
1995	123.8	120.5	108.0	87.3	89.6
Average annual percent change:					
1987-95	1.7	1.2	2.5	.8	1.3
1990-95	3.1	1.3	-5	-3.6	-1.9

¹ All persons include paid employees, unpaid family workers, and the self-employed.
NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

Table 167. Home furniture, furnishings, and equipment stores (SIC 57): Indexes of output per hour and related measures, 1972-95
(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	62.6	68.2	47.0	75.0	68.9
1973	67.0	71.6	50.9	75.9	71.1
1974	64.9	69.7	50.8	78.2	72.9
1975	64.7	69.7	49.3	76.2	70.7
1976	66.9	71.7	53.0	79.2	73.9
1977	70.2	74.1	56.7	80.8	76.5
1978	70.2	74.6	60.1	85.6	80.5
1979	75.4	79.5	65.5	86.8	82.4
1980	75.1	78.2	63.9	85.1	81.7
1981	78.7	81.2	63.8	81.0	78.5
1982	76.1	77.5	60.9	80.1	78.6
1983	83.1	86.2	70.6	84.9	81.9
1984	90.4	92.2	79.2	87.7	85.9
1985	92.9	94.7	88.5	95.2	93.4
1986	99.5	99.8	98.1	98.6	98.3
1987	100.0	100.0	100.0	100.0	100.0
1988	105.0	107.0	107.9	102.8	100.9
1989	106.1	107.9	114.6	108.1	106.2
1990	108.3	108.7	114.0	105.3	104.8
1991	111.0	112.1	113.9	102.7	101.6
1992	120.4	120.8	119.5	99.2	98.9
1993	125.0	126.0	130.2	104.2	103.3
1994	133.3	134.7	146.4	109.8	108.7
1995	143.1	143.6	161.3	112.8	112.3
Average annual percent change:					
1987-95	3.9	3.4	5.8	1.8	2.3
1990-95	5.7	5.7	7.2	1.4	1.4

¹ All persons include paid employees, unpaid family workers, and the self-employed.
NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce; and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 168. Furniture and homefurnishings stores (SIC 571): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	81.1	86.7	61.7	76.2	71.2
1973	83.9	89.2	66.7	79.5	74.8
1974	81.1	86.6	65.9	81.2	76.1
1975	78.6	83.9	60.5	77.0	72.1
1976	82.3	86.9	64.8	78.8	74.6
1977	87.2	90.7	70.5	80.8	77.7
1978	85.3	89.5	74.2	87.0	83.0
1979	91.0	93.7	79.2	87.0	84.5
1980	84.6	87.6	74.9	88.5	85.5
1981	87.3	89.7	72.7	83.3	81.1
1982	83.8	84.1	68.1	81.3	81.0
1983	89.5	91.4	76.7	85.7	84.0
1984	97.9	98.8	85.6	87.5	86.7
1985	94.8	96.7	90.2	95.1	93.3
1986	101.2	101.6	99.2	98.0	97.6
1987	100.0	100.0	100.0	100.0	100.0
1988	98.9	101.1	104.0	105.2	102.9
1989	101.3	103.5	110.2	108.7	106.4
1990	102.2	103.4	106.3	103.9	102.8
1991	101.6	103.0	107.6	101.1	99.5
1992	108.6	108.9	105.8	97.4	97.1
1993	108.9	110.0	110.9	101.8	100.8
1994	111.0	113.0	118.5	106.7	104.9
1995	116.4	118.0	124.0	106.6	105.1
Average annual percent change:					
1987-95	2.3	1.9	3.9	1.6	2.0
1990-95	2.6	2.7	3.1	3	4

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 169. Appliance, radio, television, and computer stores (SIC 572, 573): Indexes of output per hour and related measures,
1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	43.1	48.1	31.5	73.2	65.5
1973	48.6	52.3	34.3	70.7	65.6
1974	47.3	51.3	34.9	73.8	68.1
1975	49.0	53.4	36.7	74.9	68.6
1976	49.7	54.5	39.7	79.8	72.8
1977	51.6	55.8	41.7	80.8	74.7
1978	53.5	58.2	44.6	83.5	76.7
1979	58.1	63.4	50.3	86.6	79.3
1980	64.2	67.6	51.5	80.1	76.1
1981	68.7	71.3	53.3	77.6	74.8
1982	66.8	70.0	52.5	78.5	75.0
1983	75.3	79.9	63.1	83.7	78.9
1984	81.1	84.2	71.4	88.1	84.8
1985	90.6	92.0	86.2	95.2	93.7
1986	97.2	97.3	96.6	99.4	99.3
1987	100.0	100.0	100.0	100.0	100.0
1988	113.8	115.2	113.3	99.6	98.3
1989	112.6	114.0	120.7	107.2	106.0
1990	116.5	115.9	124.7	107.1	107.6
1991	123.9	124.6	130.0	104.9	104.3
1992	136.7	137.4	139.1	101.7	101.2
1993	147.5	148.4	158.4	107.4	106.7
1994	165.2	165.5	166.2	113.9	113.7
1995	180.6	179.1	218.6	121.0	122.1
Average annual percent change:					
1987-95	6.0	5.4	8.3	2.1	2.8
1990-95	9.2	9.1	11.9	2.5	2.6

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 170. Household appliance stores (SIC 572): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	55.6	62.0	65.9	118.5	106.3
1973	59.8	64.5	67.6	113.0	104.8
1974	60.0	64.6	65.7	109.5	101.6
1975	58.8	63.4	58.6	99.7	92.4
1976	56.7	61.6	62.2	109.8	101.0
1977	65.6	69.8	67.7	103.2	96.9
1978	65.5	70.0	69.3	105.8	99.1
1979	72.9	77.5	76.5	105.0	98.7
1980	71.9	74.4	73.6	102.3	98.9
1981	75.1	76.8	70.2	93.5	91.5
1982	66.6	68.3	66.0	99.0	96.6
1983	71.0	74.2	74.8	104.4	100.7
1984	87.2	89.4	92.4	94.5	92.2
1985	94.9	97.1	96.8	102.0	99.7
1986	106.5	106.8	107.6	101.1	100.8
1987	100.0	100.0	100.0	100.0	100.0
1988	98.5	98.6	100.8	102.3	102.2
1989	103.5	105.1	107.1	103.5	102.0
1990	102.8	103.9	102.0	99.3	98.2
1991	105.2	108.4	97.5	92.6	90.0
1992	113.9	116.9	100.0	87.8	85.5
1993	114.6	119.8	106.6	93.0	89.0
1994	115.9	121.0	103.0	88.9	85.1
1995	119.9	122.3	103.8	86.5	84.8
Average annual percent change:					
1972-95	3.4	3.0	2.0	-1.4	-1.0
1990-95	3.1	3.3	.4	-2.7	-2.9

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 171. Radio, television, and computer stores (SIC 573): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	39.4	43.6	21.8	55.2	49.9
1973	45.6	48.6	21.6	53.9	50.5
1974	43.4	47.0	25.9	59.6	55.1
1975	45.8	50.1	29.8	65.1	59.5
1976	48.1	52.8	32.7	68.0	62.0
1977	46.8	50.8	33.7	71.9	66.2
1978	49.5	54.2	36.9	74.6	68.1
1979	53.0	58.5	42.1	79.4	71.9
1980	62.3	65.9	44.4	71.3	67.4
1981	67.1	70.1	47.9	71.3	68.3
1982	68.4	72.0	48.1	70.3	66.7
1983	78.4	83.9	59.2	75.5	70.5
1984	79.1	82.6	67.7	85.6	82.0
1985	89.3	90.5	82.6	92.5	91.3
1986	94.1	93.9	92.8	98.6	98.8
1987	100.0	100.0	100.0	100.0	100.0
1988	119.3	121.3	117.6	98.6	97.0
1989	115.7	116.9	125.5	108.5	107.3
1990	120.9	119.8	132.7	109.8	110.8
1991	129.6	129.5	141.4	109.1	109.2
1992	143.5	143.4	152.8	106.5	106.6
1993	157.3	156.7	176.7	112.4	112.8
1994	178.4	177.1	218.8	122.6	123.5
1995	195.6	193.0	260.1	133.0	134.8
Average annual percent change:					
1972-95	7.2	6.7	11.4	3.9	4.4
1990-95	10.1	10.0	14.4	3.9	4.0

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Economic Analysis and the Bureau of

the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 172. Eating and drinking places (SIC 58): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	109.0	128.2	64.9	59.5	50.6
1973	110.3	127.2	68.2	61.8	53.6
1974	105.7	119.6	67.4	63.8	56.4
1975	107.9	120.6	70.6	65.4	58.5
1976	108.4	118.9	74.6	68.8	62.7
1977	107.2	114.5	76.9	71.7	67.1
1978	106.4	111.5	80.2	75.3	71.9
1979	108.6	109.0	82.7	77.6	75.9
1980	106.8	107.1	82.8	77.5	77.3
1981	104.1	104.7	82.9	79.6	79.2
1982	103.5	104.6	84.0	81.1	80.4
1983	102.6	103.9	87.1	84.9	83.8
1984	98.9	100.3	89.3	90.3	89.1
1985	96.2	96.0	90.4	94.0	94.2
1986	99.3	97.9	94.5	95.2	96.5
1987	100.0	100.0	100.0	100.0	100.0
1988	102.8	101.9	104.9	102.1	102.9
1989	102.2	100.8	106.1	103.9	105.3
1990	104.0	101.6	108.3	104.1	106.6
1991	103.1	100.1	106.4	103.2	106.3
1992	102.4	99.1	107.1	104.6	108.1
1993	103.1	100.5	112.2	108.8	111.6
1994	101.4	99.5	115.1	113.6	115.7
1995	102.2	98.9	117.7	115.2	119.0
Average annual percent change:					
1958-95	.3	.8	2.9	2.6	3.7
1990-95	-3	-5	1.7	2.0	2.2

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of

Economic Analysis, U.S. Department of Commerce; and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 173. Drug and proprietary stores (SIC 591): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	86.5	95.0	78.5	90.8	82.7
1973	92.2	99.2	82.4	89.4	83.1
1974	93.8	101.2	84.6	90.2	83.6
1975	90.0	99.9	83.7	93.0	83.8
1976	93.8	101.7	86.2	91.9	84.7
1977	97.9	102.3	87.8	89.7	85.8
1978	100.6	105.5	90.1	89.5	85.4
1979	101.8	107.5	93.2	91.5	86.7
1980	104.5	106.2	92.8	88.8	87.4
1981	105.0	105.6	92.6	88.2	87.7
1982	104.9	104.3	90.7	86.4	86.9
1983	108.6	107.4	93.7	86.2	87.2
1984	106.4	106.9	95.9	90.1	99.7
1985	102.5	103.6	96.7	94.3	93.3
1986	101.6	102.2	98.4	96.9	96.3
1987	100.0	100.0	100.0	100.0	100.0
1988	101.9	99.6	100.9	99.1	101.4
1989	102.5	99.8	103.5	101.0	103.7
1990	103.6	101.8	107.7	103.9	105.7
1991	104.7	102.6	107.8	103.0	105.1
1992	103.6	102.6	105.5	101.9	102.8
1993	104.7	104.1	104.9	100.3	100.8
1994	103.7	103.6	104.8	101.1	101.2
1995	102.8	104.0	106.5	103.5	102.4
Average annual percent change:					
1958-95	2.3	1.6	2.8	.5	1.1
1990-95	-2	-4	-2	-1	-6

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor

Statistics. All persons and hours based on data from the Bureau of the Census; the Bureau of Labor Statistics; and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 174. Liquor stores (SIC 592): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	95.7	108.4	101.2	105.8	93.4
1973	95.0	109.5	103.2	108.5	94.2
1974	93.6	108.4	103.1	110.1	95.1
1975	90.4	103.7	102.6	113.5	98.9
1976	94.4	105.3	103.9	110.1	98.7
1977	93.3	103.5	105.6	113.2	102.0
1978	88.7	95.5	104.1	117.4	109.0
1979	90.2	95.6	107.6	119.3	112.5
1980	95.7	96.9	110.4	115.4	113.9
1981	97.4	97.5	108.4	111.3	111.1
1982	101.6	100.3	106.4	104.7	106.0
1983	95.8	98.1	107.6	112.3	109.7
1984	93.6	94.0	100.7	107.6	107.2
1985	101.9	98.9	104.7	102.8	105.9
1986	93.8	94.1	102.8	109.6	109.3
1987	100.0	100.0	100.0	100.0	100.0
1988	98.2	98.4	96.5	98.3	98.0
1989	101.1	99.1	95.2	94.2	96.0
1990	105.2	102.1	98.4	93.5	96.3
1991	105.9	101.6	91.5	86.5	90.1
1992	108.4	100.7	86.1	79.4	85.5
1993	100.5	95.3	84.7	84.3	88.9
1994	98.7	95.1	86.8	87.9	91.2
1995	104.4	100.1	87.2	83.5	87.1
Average annual percent change:					
1972-95	.4	.3	.6	-1.0	-3
1990-95	-2	-4	-2.4	-2.2	-2.0

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 175. Miscellaneous shopping goods stores (SIC 594): Indexes of output per hour and related measures, 1977-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1977	84.1	90.0	60.3	71.6	84.9
1978	91.3	96.0	69.5	76.1	72.4
1979	89.5	92.1	70.1	78.3	76.1
1980	88.4	90.0	69.9	79.0	77.7
1981	87.1	88.7	71.9	82.6	81.0
1982	89.1	89.6	73.2	82.2	81.7
1983	88.2	89.4	75.6	85.8	84.6
1984	92.6	94.2	83.3	90.0	88.4
1985	94.1	94.8	85.5	90.8	90.2
1986	97.1	96.5	91.7	94.5	95.0
1987	100.0	100.0	100.0	100.0	100.0
1988	98.4	97.7	105.9	107.6	108.3
1989	101.7	100.7	111.7	109.8	111.0
1990	101.5	100.1	110.9	109.3	110.7
1991	102.0	99.9	108.6	106.4	108.7
1992	100.6	99.3	109.0	108.3	109.7
1993	103.9	103.8	114.3	110.0	110.1
1994	108.2	107.5	122.4	113.1	113.8
1995	114.0	111.8	128.1	112.4	114.6
Average annual percent change:					
1977-95	1.7	1.2	4.3	2.5	3.0
1990-95	2.3	2.2	2.9	.6	.7

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of Labor Statistics and the Bureau of the Census.

Table 176. Commercial banks (SIC 602): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1972	76.5	76.9	51.4	67.1	66.8
1973	81.2	81.7	57.5	70.8	70.4
1974	76.1	76.9	57.3	75.3	74.5
1975	76.3	77.2	58.5	76.7	75.8
1976	80.5	81.4	63.4	78.8	77.9
1977	84.7	85.9	69.1	81.6	80.5
1978	85.8	86.6	73.3	85.4	84.4
1979	84.1	84.5	75.2	89.5	89.0
1980	78.5	78.8	73.4	93.4	93.1
1981	77.8	78.7	74.7	96.0	94.9
1982	80.1	81.0	78.1	97.6	96.5
1983	87.1	87.6	84.5	97.0	96.4
1984	89.6	90.7	88.1	98.3	97.2
1985	94.3	94.6	93.5	99.2	98.9
1986	96.2	97.0	97.2	101.0	100.2
1987	100.0	100.0	100.0	100.0	100.0
1988	102.9	101.4	101.1	98.3	99.7
1989	101.3	99.6	100.7	99.4	101.0
1990	104.6	102.6	104.2	99.6	101.6
1991	107.4	104.5	103.8	96.6	99.4
1992	109.4	106.4	103.0	94.1	96.8
1993	119.5	115.5	112.4	94.1	97.3
1994	119.5	115.8	111.7	93.5	96.4
1995	124.4	121.7	116.0	93.2	95.3
Average annual percent change:					
1986-95	2.0	1.9	4.3	2.2	2.3
1990-95	3.5	3.5	2.2	-1.3	-1.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Federal Reserve Bank of Atlanta, the Board of Governors, Federal Reserve System; the Federal Deposit Insurance Corporation, the U.S.

Department of Housing and Urban Development, the VISACARD Network and Interbank Card Network Associations, the American Council of Life Insurance, and the National Automatic Clearing House Association. Employment and hours based on data from the Bureau of Labor Statistics.

Table 177. Hotels and motels (SIC 701): Indexes of output per hour and related measures, 1972-95

(1987=100)

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	100.2	106.9	59.5	59.4	55.7
1973	102.4	109.8	63.8	62.3	58.1
1974	99.4	104.8	63.1	63.5	60.2
1975	99.9	103.0	63.3	63.4	61.5
1976	106.8	109.7	69.6	65.2	63.5
1977	111.5	112.5	73.6	66.0	65.4
1978	116.3	117.3	79.3	68.2	67.6
1979	109.7	110.7	80.8	73.7	73.0
1980	103.9	104.1	77.2	74.3	74.1
1981	103.6	104.0	80.5	77.7	77.4
1982	101.9	101.9	80.2	78.7	78.7
1983	105.8	105.0	84.9	80.2	80.8
1984	101.6	101.1	87.2	85.8	86.3
1985	101.2	100.0	91.0	89.9	91.0
1986	96.9	98.3	92.1	93.1	93.7
1987	100.0	100.0	100.0	100.0	100.0
1988	97.6	99.6	105.1	107.7	105.6
1989	95.0	96.5	105.5	111.1	109.4
1990	96.0	96.0	106.8	111.2	111.3
1991	99.0	98.4	106.9	108.0	108.6
1992	107.6	106.5	114.1	106.0	107.1
1993	106.8	106.8	116.3	106.9	108.9
1994	111.0	111.2	123.0	110.8	110.6
1995	113.2	113.3	127.1	112.3	112.2
Average annual percent change:					
1986-95	1.3	.7	3.6	2.2	2.9
1990-95	3.4	3.4	3.5	.2	.2

¹ All persons include paid employees and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics, the Bureau of the

Census, and the Smith Travel Research Company. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 178. Laundry, cleaning, and garment services (SIC 721): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	111.0	115.1	129.8	117.0	111.8
1973	110.8	117.8	123.1	111.1	104.5
1974	110.7	115.3	112.5	101.6	97.6
1975	109.8	113.3	106.1	96.7	93.7
1976	111.4	114.1	102.5	92.0	89.8
1977	115.0	117.1	103.4	89.9	88.3
1978	116.7	118.7	104.4	89.4	87.9
1979	109.9	111.5	100.5	91.5	90.2
1980	103.2	104.8	96.5	93.5	92.1
1981	100.6	100.7	90.1	89.6	89.5
1982	105.6	103.5	88.8	83.9	85.6
1983	105.2	103.7	91.1	86.8	87.8
1984	107.5	106.6	97.2	90.4	91.2
1985	103.3	103.9	98.7	95.6	95.0
1986	100.8	101.8	98.0	97.3	96.3
1987	100.0	100.0	100.0	100.0	100.0
1988	97.2	99.3	104.9	108.0	105.7
1989	100.5	102.2	106.5	106.0	104.2
1990	101.0	101.0	106.2	105.1	105.1
1991	98.7	99.0	103.2	104.6	104.3
1992	99.9	100.9	107.4	107.6	106.4
1993	99.9	100.7	106.2	106.3	105.5
1994	101.9	102.1	107.5	105.5	105.2
1995	105.1	105.2	111.9	106.4	106.4
Average annual percent change:					
1986-95	.6	.2	.4	-1.0	-8
1990-95	.8	.8	1.1	.2	2

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of Labor Statistics, Bureau of the Census and the Bureau of Economic Analysis, U.S. Department of Commerce; and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 179. Beauty and barber shops (SIC 723, 724): Indexes of output per hour and related measures, 1972-95
(1967=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	85.3	89.9	81.6	95.7	90.8
1973	81.8	86.7	80.2	98.1	92.5
1974	82.6	85.0	78.6	92.7	90.1
1975	80.2	82.0	73.5	91.6	89.6
1976	77.3	79.2	71.1	92.0	89.8
1977	83.0	84.2	76.8	92.6	91.2
1978	86.0	86.8	81.0	94.1	93.3
1979	89.4	88.0	81.3	91.0	92.4
1980	85.7	84.3	79.8	93.1	94.7
1981	91.0	88.6	77.1	84.7	87.0
1982	91.2	85.5	75.5	82.8	87.3
1983	102.4	96.8	86.6	84.6	89.5
1984	96.6	94.1	87.4	90.5	92.9
1985	94.6	94.6	90.8	96.0	96.0
1986	96.3	96.4	94.4	98.0	97.9
1987	100.0	100.0	100.0	100.0	100.0
1988	96.8	98.3	104.1	107.5	105.9
1989	101.2	102.9	106.4	105.1	103.4
1990	97.4	98.7	104.0	106.8	105.4
1991	95.0	95.4	103.1	108.5	108.0
1992	101.3	100.1	110.4	109.0	110.1
1993	99.3	98.1	109.7	110.5	111.8
1994	103.4	103.0	111.6	107.8	106.3
1995	107.1	106.0	118.1	110.3	111.5
Average annual percent change:					
1972-95	1.0	.7	1.6	6	9
1990-95	1.9	1.4	2.6	5	1.1

¹ All persons include paid employees and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 180. Beauty shops (SIC 723): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	89.0	91.4	71.8	80.7	78.6
1973	85.9	86.1	70.5	82.1	80.1
1974	85.8	86.0	68.9	80.2	80.1
1975	81.0	80.2	65.3	80.7	81.5
1976	76.3	76.6	63.1	82.7	82.3
1977	82.8	82.9	70.7	85.4	85.3
1978	86.7	86.4	75.1	86.6	86.9
1979	89.4	87.9	78.7	85.8	87.3
1980	87.9	85.2	75.8	86.2	89.0
1981	94.9	90.9	74.3	78.3	81.8
1982	94.4	88.1	73.5	77.9	83.4
1983	103.5	97.7	85.4	82.5	87.4
1984	98.5	95.3	86.8	88.2	91.1
1985	96.1	95.8	90.5	94.2	94.5
1986	96.9	96.7	94.0	97.0	97.2
1987	100.0	100.0	100.0	100.0	100.0
1988	95.1	97.2	104.4	108.8	107.4
1989	99.6	101.9	107.9	106.3	106.0
1990	96.8	98.6	105.2	108.7	106.7
1991	94.8	96.3	104.4	110.1	108.4
1992	99.6	99.7	112.6	113.0	112.9
1993	96.5	96.7	112.0	116.0	115.8
1994	101.1	101.9	113.9	112.6	111.8
1995	104.8	104.4	120.8	115.2	115.7
Average annual percent change:					
1972-95	.7	.6	2.3	1.6	1.7
1990-95	1.8	1.1	2.8	1.2	1.6

¹ All persons include paid employees and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

**Table 181. Automotive repair shops (SIC 753): Indexes of output per hour and related measures, 1972-95
(1987=100)**

Year	Output per hour of all persons ¹	Output per person	Output	Hours of all persons	All persons
Index:					
1972	108.8	111.1	58.2	53.5	52.4
1973	109.4	114.3	62.2	56.8	54.4
1974	113.4	118.0	65.3	57.6	55.4
1975	106.7	109.3	63.0	61.0	59.5
1976	106.0	111.7	68.6	63.0	61.4
1977	104.5	106.1	70.0	67.0	65.0
1978	105.3	106.5	74.3	70.6	69.8
1979	104.9	107.4	78.5	74.9	73.2
1980	100.4	102.1	75.0	74.7	73.4
1981	97.7	98.0	72.3	74.0	73.8
1982	91.8	92.2	71.7	78.3	77.8
1983	89.8	91.0	75.9	84.5	83.4
1984	91.7	92.4	83.7	90.7	90.1
1985	99.4	100.1	96.2	96.8	96.1
1986	96.2	97.9	96.2	100.0	98.3
1987	100.0	100.0	100.0	100.0	100.0
1988	105.7	105.6	108.4	102.5	102.6
1989	108.1	109.4	113.2	104.7	103.5
1990	106.9	108.4	112.8	105.6	104.1
1991	98.7	99.2	102.4	103.7	103.2
1992	103.3	104.9	110.7	107.1	105.5
1993	102.9	104.5	114.5	111.2	109.5
1994	110.4	114.8	121.7	110.2	106.0
1995	116.4	119.2	126.4	106.7	106.0
Average annual percent change:					
1972-95	.3	.3	3.4	3.1	3.1
1990-95	1.7	1.9	2.3	.6	.4

¹ All persons include paid employees, unpaid family workers, and the self-employed.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the

Census. Persons and hours based on data from the Bureau of Labor Statistics, the Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

Part II. Multifactor Productivity Trends for Selected Industries

Multifactor productivity increased during 1994 in eight of the nine measured manufacturing industries presented here. (The tenth industry for which multifactor productivity is measured is outside of the manufacturing sector.) Several industries had multifactor productivity gains exceeding 3 percent, including *cotton and synthetic broadwoven fabrics* (8.1 percent), *footwear* (7.2 percent), *tires and inner tubes* (5.4 percent), and *metal stampings* (3.7 percent). Other industries showed more modest increases: *Steel* (2.5 percent); *farm and garden machinery* (2.1 percent); *refrigeration and heating equipment* (2.1 percent); and *motor vehicles and equipment* (0.3 percent). Multifactor productivity in *household furniture* declined slightly by 0.3 percent.

In 1993 as well, eight of the nine manufacturing industries covered had gains in multifactor productivity. Strong increases of 7.8 percent and 6.3 percent were recorded in the *tires and inner tubes* industry and the *steel* industry, respectively. Gains well above their long-term averages were recorded in *metal stampings* (3.4 percent), *footwear* (2.9 percent), and in *cotton and synthetic broadwoven fabrics* (2.5 percent).

Railroad transportation, the only nonmanufacturing industry measured to date, recorded a 3.3-percent multifactor productivity gain in 1993, the latest year available for that industry. Smaller increases were recorded in *refrigeration and heating equipment* (1.8 percent), *farm and garden machinery* (0.7 percent), and *household furniture* (0.3 percent). *Motor vehicles and equipment* recorded a decline of 1.7 percent in multifactor productivity in 1993.

In multifactor productivity measures, output is related to combined inputs of labor, capital, and intermediate purchases. The relationship between multifactor productivity and labor productivity (in which output is related only to labor input) is shown in table 182.

Multifactor productivity is equal to output per hour minus the effects of changes in capital per hour and intermediate purchases per hour. These effects are measured as the change in the ratio of nonlabor to labor inputs, weighted by the nonlabor input's share in the total cost of output. The capital effect, for example, is the change in the capital-labor ratio weighted by capital's share in the total cost of output. Although multifactor productivity is free of these effects of changes in other inputs relative to labor, it is still influenced by factors such as economies of scale, capacity utilization, and skill and effort of the work force as well as technological change.

Indexes of multifactor productivity, single factor pro-

ductivity (where output is related to each single factor alone) and indexes of output, combined inputs, and inputs of labor, capital, and intermediate purchases separately are shown in tables 183 through 202. Annual data on the aggregate value of output and the costs of each input are available upon request for each of these industries.

Current developments

For 1994, in *cotton and synthetic broadwoven fabrics*, the 8.1-percent jump in multifactor productivity resulted from a 5.1-percent gain in output and a 2.8-percent reduction in combined inputs. All inputs fell: Intermediate purchases by 4.1 percent, capital by 0.3 percent, and labor by 1.4 percent. The *footwear* industry's 7.2-percent increase in multifactor productivity was the largest gain recorded since that industry measure's beginning year of 1958. This gain resulted from a 6.1-percent reduction in combined inputs coupled with a 0.6-percent increase in output. Significant decreases in inputs of labor (8.6 percent) and intermediate purchases (8.1 percent) were tempered by a 1.6-percent gain in capital input.

In *tires and inner tubes*, output rose 4.1 percent, while combined inputs fell 1.2 percent, resulting in a 5.4-percent productivity gain. Capital input declined 3.4 percent and labor input dropped 2.3 percent, but intermediate purchases rose slightly at 0.4 percent. The 3.7-percent rise in multifactor productivity in *metal stampings* proceeded from a 9.4 percent jump in output and a 5.5-percent increase in combined inputs. All three inputs rose with capital up 2.2 percent, labor up 5.2 percent, and intermediate purchases up 6.2 percent.

The multifactor productivity gain of 3.3 percent for *railroad transportation* in 1993, the latest data available, derived from a 2.6-percent output gain and a 0.7-percent drop in combined inputs. Labor and capital fell 1.6 percent and 1.8 percent, respectively while intermediate purchases rose 1.4 percent.

Output in the *steel* industry jumped 8.9 percent, surpassing the 6.1-percent rise in combined inputs, and yielded a multifactor productivity gain of 2.5 percent. Inputs showed divergent trends with capital input falling 2.7 percent and labor gaining a slight 0.9 percent, while intermediate purchases surged 11.1 percent. In *farm and garden machinery*, the output surge of 13.2 percent topped the substantial 10.8 percent increase in combined inputs to produce a 2.1-percent multifactor productivity gain. Input gains ranged from 2.2 percent for capital to 15.5 percent for intermediate purchases, with labor's rise at 7.5 percent.

In the *refrigeration and heating equipment* industry trends similar to those in *farm and garden machinery* prevailed in 1994 as the output increase of 13.9 percent somewhat exceeded the 11.6-percent gain in combined inputs, resulting in the 2.1 percent multifactor productivity increase. The pattern in input gains was also similar with capital up the least (3.4 percent), intermediate purchases up the most (15.3 percent), and labor's rise in between (10.7 percent).

In *motor vehicles and equipment*, a strong increase in output in 1994 occurred (14.4 percent), but it was almost matched by the increase in combined inputs (14.0 percent). As a result, only a modest 0.3-percent gain in multifactor productivity was achieved. Strong increases in inputs of labor and intermediate purchases were recorded (12.4 percent and 17.1 percent, respectively), while capital rose 3.5 percent.

In *household furniture*, a 4.3-percent output gain was exceeded by the increase in combined inputs (4.5 percent), yielding a 0.3-percent decline in multifactor productivity. Capital and labor showed small increases (1.2 percent and 2.5 percent, respectively), but intermediate purchases jumped 6.3 percent.

Long-term trends

There was a significant dispersion of long-term (1973-1994) growth rates of multifactor productivity and output per hour (or labor productivity) for the industries measured (chart 2). Growth in output per hour ranged from a low of 0.7 percent for *footwear* to a high of 5.9 percent for *railroad transportation*. Multifactor productivity also showed a wide range with a low and high in the same two industries (-0.7 percent in *footwear* and 3.6 percent in *railroad transportation*). However, there is not a clear relationship between the magnitude of the change in output per hour and that in multifactor productivity.

As mentioned earlier labor productivity change can be

thought of as comprising multifactor productivity change and the effects of the growth in capital relative to labor and intermediate purchases relative to labor. In some industries, multifactor productivity growth accounts for well over half of the change in labor productivity. For example, in the *tires and inner tubes* industry, 3.2 percentage points of the 3.9-percent growth in output per hour were accounted for by multifactor productivity growth. Similarly, of the 5.9-percent labor productivity growth in *railroad transportation*, 3.6 percentage points were a result of multifactor productivity growth. In *refrigeration and heating equipment*, multifactor productivity growth (0.9 percent) exceeded labor productivity growth (0.7 percent).

Other industries show a different pattern. In the *cotton and synthetic broadwoven fabrics* industry, 0.8 percentage point of the 4.1 percent average gain in labor productivity was multifactor productivity growth. Other industries showing much larger labor productivity growth than multifactor productivity growth were *farm and garden machinery* (at 1.4 percent and 0.1 percent, respectively), and *motor vehicles and equipment* (at 2.1 percent and 0.0 percent, respectively). About half the growth in labor productivity was accounted for by multifactor productivity growth in the *steel* industry, while in *footwear*, multifactor productivity was negative (-0.7 percent) and labor productivity was positive (0.7 percent).

This group of 10 industries for which multifactor measures have been computed is not necessarily a representative sample of all industries. However, the measures indicate that multifactor productivity data provide significant additional information about the economic performance of an industry. That is, multifactor productivity growth is not some stable proposition of labor productivity growth across industries, even for long periods of time. This result stems from a wide variance from industry to industry in the growth of capital and intermediate purchases inputs relative to labor.

Table 182. Multifactor productivity growth and its relationship to output per hour for selected industries, 1958-94
(Average annual percent change)^a

Industry	Multifactor productivity	equals	Output per hour	minus	Capital effect ^b	minus	Intermediate purchases effect ^c
Cotton and synthetic broadwoven fabrics ^d	0.9		3.4		0.4		2.0
Household furniture	6		1.8		2		1.0
Tires and inner tubes	2.5		3.9		3		1.1
Footwear	-7		.7		.8		.9
Steel	1.8		3.6		0		1.7
Metal stamping ^e	3		1.4		2		8
Farm and garden machinery	.3		1.9		2		1.4
Refrigeration and heating equipment ^f	1.8		1.6		0		.1
Motor vehicles and equipment	1.0		2.9		-1		2.0
Railroad transportation ^g	5.9		5.9		5		1.4

^aData on the average annual percent change are based on compound rates of change. Each measure presented in this table is computed independently. Therefore, output per hour minus the capital effect minus the intermediate purchases effect may not exactly equal multifactor productivity.

^bThe capital effect is the change in capital relative to labor over the given time period weighted by the share of capital in the total cost of output.

^cThe intermediate purchases effect is the change in intermediate purchases relative to labor

over the given time period weighted by the share of intermediate purchases in the total cost of output.

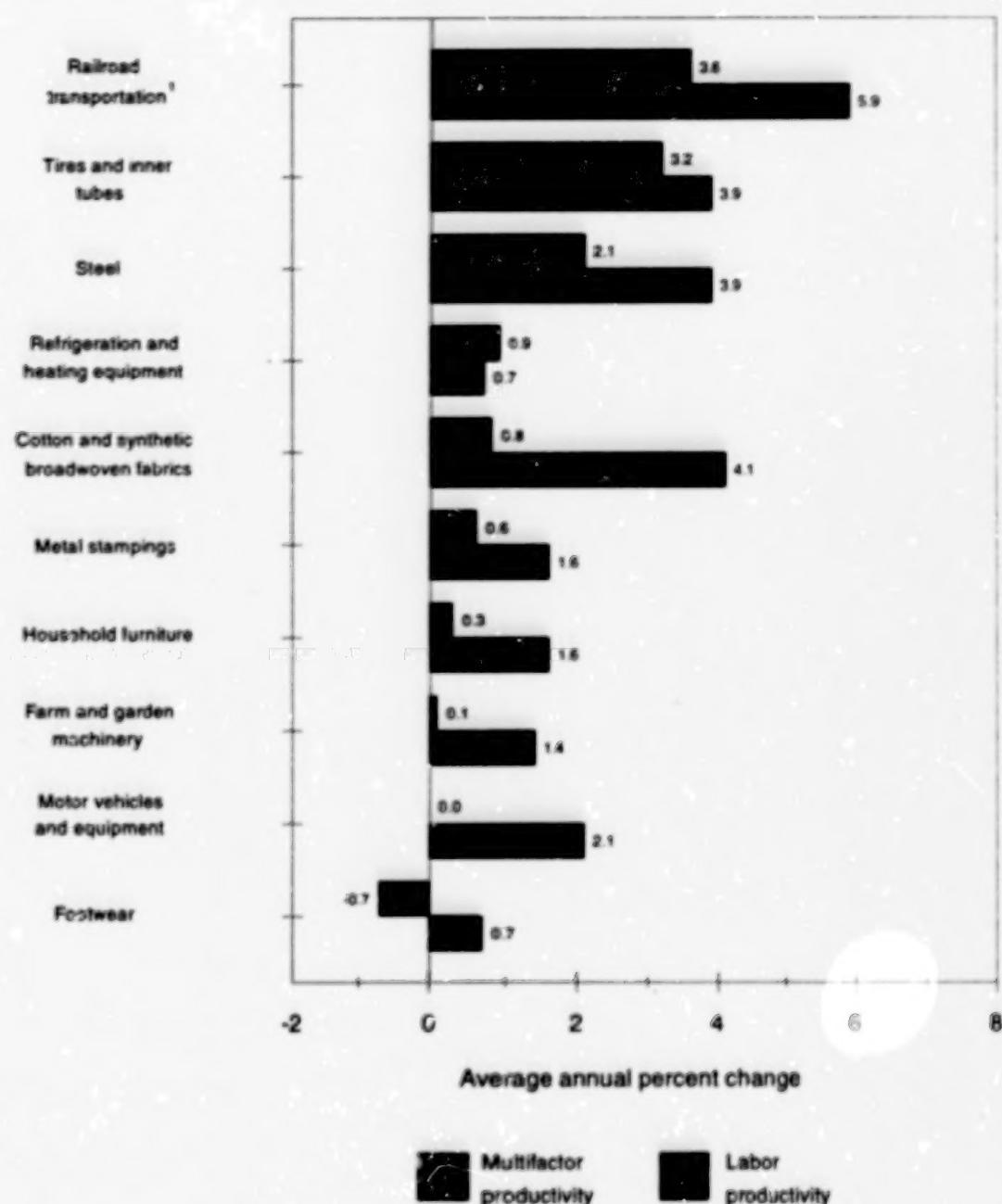
^dMeasure begins in 1972.

^eMeasure begins in 1963.

^fMeasure begins in 1987.

^gMeasure ends in 1993.

Chart 2. Multifactor productivity and labor productivity in 10 industries, 1973-94



¹ Updated to 1993 only.
Note: Average annual percent change using compound rate formula.

**Table 183. Cotton and synthetic broadwoven fabrics (SIC 221, 222): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	87.1	64.9	106.3	94.7
1973	90.4	58.1	98.1	111.0
1974	84.3	60.0	95.8	96.5
1975	85.6	66.1	93.8	95.0
1976	92.7	66.1	106.2	106.0
1977	94.2	75.4	114.7	100.3
1978	87.7	70.5	102.6	94.2
1979	92.1	75.6	109.6	97.3
1980	97.5	78.4	108.2	105.8
1981	90.3	80.7	103.0	93.0
1982	88.0	85.5	87.9	89.4
1983	94.6	92.8	100.4	94.4
1984	94.2	91.1	97.2	95.2
1985	92.9	94.8	89.0	93.2
1986	96.7	101.1	93.8	95.6
1987	100.0	100.0	100.0	100.0
1988	95.8	100.0	98.5	92.9
1989	97.5	103.9	98.2	94.4
1990	98.9	108.1	95.1	95.9
1991	100.2	113.8	97.3	95.1
1992	96.2	118.4	103.9	85.6
1993	98.6	125.8	110.4	85.5
1994	106.6	134.1	116.4	93.7
Average annual percent change:				
1972-94	.9	3.4	.4	.0
1980-94	1.9	5.5	5.2	-6

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor

Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the U.S. Department of Agriculture; the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 184. Cotton and synthetic broadwoven fabrics (SIC 221, 222): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	99.1	113.8	152.8	93.2	104.6
1973	89.6	99.1	154.3	91.3	80.7
1974	88.5	105.0	147.5	92.4	91.7
1975	88.8	103.7	134.4	94.7	93.5
1976	99.5	107.3	150.5	93.7	93.9
1977	110.7	117.5	146.8	96.5	110.4
1978	99.9	113.9	141.8	97.4	106.1
1979	107.3	116.5	141.9	97.9	110.3
1980	107.3	110.1	136.9	99.2	101.4
1981	104.4	115.6	129.4	101.4	112.2
1982	90.4	102.7	105.8	102.9	101.1
1983	103.1	109.0	111.1	102.7	109.2
1984	100.6	106.8	110.4	103.5	105.7
1985	92.6	99.7	97.6	104.0	99.4
1986	95.9	99.2	94.9	102.2	100.3
1987	100.0	100.0	100.0	100.0	100.0
1988	97.5	101.8	97.5	99.0	104.9
1989	98.5	99.0	92.9	98.3	102.2
1990	92.2	93.2	85.3	97.0	98.1
1991	92.2	92.0	81.0	94.8	98.9
1992	95.9	99.7	81.0	92.3	112.0
1993	100.2	101.6	79.6	90.8	117.2
1994	105.3	98.8	78.5	90.5	112.4
Average annual percent change:					
1972-94	.3	-6	-3.0	-1	.3
1980-94	3.4	1.5	-2.1	-1.7	4.0

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's

Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the U.S. Department of Agriculture; the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 185. Household furniture (SIC 251): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	93.3	78.9	105.4	97.8
1973	95.3	80.6	102.6	103.0
1974	94.4	79.9	88.4	103.9
1975	90.3	82.1	74.9	98.5
1976	94.3	84.3	86.5	101.4
1977	97.3	86.8	92.3	103.0
1978	98.9	87.0	97.2	104.0
1979	99.2	89.1	92.7	106.0
1980	98.5	93.2	86.8	104.0
1981	99.9	94.1	87.1	105.9
1982	97.5	94.8	77.2	104.0
1983	99.0	94.5	85.6	104.3
1984	98.0	94.5	90.0	101.7
1985	95.9	93.5	88.3	98.9
1986	98.1	98.2	94.5	98.9
1987	100.0	100.0	102.0	100.0
1988	99.5	99.3	97.9	100.0
1989	98.4	101.9	98.6	96.9
1990	98.7	104.3	96.2	96.6
1991	98.4	106.8	93.2	95.6
1992	102.0	110.2	99.0	99.0
1993	102.3	110.3	102.1	98.6
1994	102.0	112.2	105.3	96.8
Average annual percent change:				
1958-94	.6	1.8	.2	.1
1990-94	8	1.8	2.3	1

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the International Sleep Products Association, the Bureau of the Census, and the Bureau of Labor Statistics.

Hours based on data from the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 186. Household furniture (SIC 251): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	87.8	94.1	111.3	83.3	89.8
1973	93.0	95.6	115.4	90.6	90.3
1974	85.2	90.3	106.7	96.4	82.0
1975	72.7	80.5	88.6	97.0	73.8
1976	82.2	87.2	97.5	95.0	81.1
1977	89.6	92.1	100.9	97.1	87.0
1978	96.4	97.5	107.2	99.2	92.7
1979	93.8	94.6	105.2	101.2	88.5
1980	88.0	89.3	94.4	101.4	84.6
1981	88.3	88.4	93.9	101.4	83.4
1982	77.8	79.8	82.1	100.8	74.8
1983	85.3	86.2	90.2	99.7	81.8
1984	90.4	92.2	95.7	100.4	88.9
1985	88.5	92.3	94.7	100.2	89.5
1986	93.7	95.5	95.4	99.2	94.7
1987	100.0	100.0	100.0	100.0	100.0
1988	98.9	99.4	99.6	101.0	98.9
1989	99.6	101.2	97.8	101.0	102.8
1990	96.4	97.7	92.4	100.2	99.8
1991	91.9	93.4	86.0	98.6	98.1
1992	98.5	94.6	87.5	97.5	97.5
1993	99.9	97.7	90.6	97.8	101.3
1994	104.2	102.1	92.9	99.0	107.7
Average annual percent change:					
1958-94	2.3	1.7	.5	2.0	2.2
1990-94	2.0	1.1	.1	-.3	1.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the International Sleep Products Association, the Bureau of the Census, and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S.

Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 187. Tires and inner tubes (SIC 301): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	62.1	57.7	68.4	63.7
1973	61.6	56.0	66.0	64.5
1974	60.4	54.8	53.6	63.6
1975	58.1	54.1	53.6	62.9
1976	60.5	59.2	56.8	63.9
1977	66.6	59.5	73.1	70.0
1978	68.9	64.3	72.4	71.9
1979	70.3	63.9	72.3	74.5
1980	68.8	60.7	56.8	77.2
1981	74.7	70.0	66.8	80.5
1982	79.1	76.2	67.7	85.5
1983	84.9	51.4	78.4	89.3
1984	89.3	68.8	94.2	88.1
1985	86.7	89.3	88.9	88.5
1986	91.7	92.6	86.9	93.3
1987	100.0	100.0	100.0	100.0
1988	99.6	102.9	105.2	96.2
1989	100.0	103.8	102.2	97.4
1990	100.0	103.0	94.4	100.8
1991	98.3	102.4	89.6	100.2
1992	104.8	107.8	103.5	103.9
1993	113.0	116.5	113.4	111.1
1994	119.1	124.1	122.0	115.1
Average annual percent change:				
1988-94	2.5	3.9	1.9	2.1
1990-94	4.5	4.8	6.6	3.4

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Rubber Manufacturers Association, the Bureau of the Census, and the Bureau of Labor Statistics.

Hours based on data from the Bureau of the Census and the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 188. Tires and inner tubes (SIC 301): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	96.8	155.9	167.9	141.6	152.0
1973	97.7	158.5	174.4	148.0	151.5
1974	99.0	163.9	180.7	155.7	155.6
1975	85.7	147.4	158.4	159.9	136.2
1976	85.1	140.6	143.8	149.7	133.1
1977	104.6	157.1	175.8	143.1	149.4
1978	101.5	147.3	157.9	140.2	141.1
1979	98.3	139.0	153.7	136.0	132.0
1980	76.7	111.5	126.4	130.5	99.4
1981	82.4	110.3	117.6	123.3	102.3
1982	77.9	98.5	102.2	115.0	91.1
1983	83.6	98.5	102.7	106.7	93.6
1984	96.6	108.2	108.8	102.6	109.6
1985	92.5	104.3	103.6	104.0	104.5
1986	89.9	98.0	97.1	103.4	96.4
1987	100.0	100.0	100.0	100.0	100.0
1988	103.0	103.4	100.1	97.9	107.1
1989	103.4	103.4	99.7	101.2	106.2
1990	100.2	100.2	97.3	106.2	99.4
1991	93.8	95.4	91.6	104.7	93.6
1992	104.4	99.6	96.8	100.9	100.5
1993	111.1	98.3	95.3	98.0	100.0
1994	115.6	97.1	93.1	94.7	100.4
Average annual percent change:					
1988-94	2.9	.4	-1.0	1.0	.9
1990-94	3.6	-8	-1.1	-2.8	.3

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Rubber Manufacturers Association, the Bureau of the Census, and the Bureau of Labor Statistics. Hours based on data from the Bureau of the Census and the Bureau of Labor Statistics. Capital based on data from the Internal

Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 189. Footwear (SIC 314): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	112.1	92.9	176.8	107.9
1973	110.0	90.7	160.1	109.0
1974	106.2	89.5	147.3	105.5
1975	106.0	93.6	141.9	103.5
1976	108.8	94.6	153.1	105.6
1977	107.8	94.8	148.1	104.7
1978	109.2	97.0	148.7	105.8
1979	113.3	94.5	145.1	115.2
1980	105.2	93.5	140.8	102.4
1981	100.2	90.3	135.0	96.7
1982	103.5	99.7	129.2	98.6
1983	102.1	97.2	124.4	98.5
1984	101.7	98.8	115.2	99.4
1985	97.6	100.3	104.9	94.2
1986	97.3	101.9	97.9	94.8
1987	100.0	100.0	100.0	100.0
1988	101.7	102.3	103.4	101.0
1989	97.6	100.9	99.9	95.3
1990	88.3	92.8	91.0	85.5
1991	91.5	93.1	88.9	91.6
1992	86.8	93.3	90.8	82.4
1993	89.3	96.4	93.4	84.8
1994	95.7	106.0	92.5	92.8
Average annual percent change:				
1958-94	-7	.7	-2.4	-1.0
1990-94	2.0	3.4	4	2.1

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Hours based on data from the Bureau of the Census and the Bureau of Labor

Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 190. Footwear (SIC 314): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	230.5	205.7	248.0	130.4	213.7
1973	213.7	194.3	235.6	133.5	196.0
1974	197.8	186.2	220.9	134.3	187.5
1975	184.6	174.1	197.1	130.1	178.3
1976	191.7	176.2	202.6	125.2	181.5
1977	185.7	172.3	196.0	125.4	177.3
1978	185.6	169.9	191.4	124.8	175.4
1979	174.6	154.1	184.7	120.3	151.5
1980	169.0	160.6	180.7	120.0	165.1
1981	163.7	163.3	181.2	121.3	169.3
1982	159.1	153.7	159.5	123.1	161.3
1983	147.7	144.7	152.0	118.7	150.0
1984	132.1	129.9	133.8	114.7	132.9
1985	115.8	118.8	115.5	110.5	123.1
1986	102.7	105.6	100.8	104.9	108.3
1987	100.0	100.0	100.0	100.0	100.0
1988	99.3	97.6	97.1	96.0	98.3
1989	91.9	94.2	91.1	92.0	96.4
1990	79.2	89.7	85.4	87.0	92.6
1991	72.0	78.7	77.3	81.0	78.6
1992	70.2	80.9	75.2	77.3	85.2
1993	71.9	80.5	74.6	77.0	84.8
1994	72.3	75.6	68.2	78.2	77.9
Average annual percent change:					
1958-94	-3.4	-2.7	-4.1	-1.0	-2.5
1990-94	-2.3	-4.2	-5.5	-2.6	-4.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Hours based on data from the Bureau of the Census and the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's

Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 191. Steel (SIC 331): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	71.4	59.6	84.0	79.2
1973	77.3	64.2	100.5	83.6
1974	82.7	67.6	108.7	90.0
1975	71.3	59.3	82.3	79.7
1976	75.4	61.7	86.6	85.2
1977	75.0	61.8	88.1	84.0
1978	78.3	65.1	97.0	86.2
1979	77.5	65.9	100.8	83.5
1980	75.2	65.4	87.7	81.5
1981	74.6	69.3	95.2	77.4
1982	70.1	60.6	63.3	76.8
1983	83.4	73.8	71.0	90.3
1984	86.4	81.3	81.8	90.0
1985	87.5	85.8	81.9	89.4
1986	89.0	89.7	82.6	89.9
1987	100.0	100.0	100.0	100.0
1988	108.7	113.5	123.4	102.9
1989	101.5	108.5	120.4	93.9
1990	103.0	110.5	124.0	94.7
1991	97.9	106.2	115.9	89.2
1992	109.0	117.7	124.7	100.9
1993	115.9	134.0	143.6	102.1
1994	118.8	144.6	160.7	100.2
Average annual percent change:				
1958-94	1.8	3.6	2.5	.4
1990-94	3.6	7.0	6.7	1.4

1. The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the American Iron and Steel Institute; the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Hours based on data from the

American Iron and Steel Institute and the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 192. Steel (SIC 331): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	118.0	165.3	198.0	140.5	149.0
1973	138.1	178.6	215.2	137.4	165.1
1974	145.5	175.9	215.2	133.9	161.7
1975	110.5	155.0	186.2	134.3	138.7
1976	117.0	155.2	189.7	135.1	137.3
1977	118.8	158.4	192.3	134.8	141.4
1978	129.2	165.1	198.6	133.2	149.8
1979	132.3	170.8	200.9	131.2	158.5
1980	113.3	150.7	171.3	129.2	139.1
1981	121.3	162.5	175.0	127.4	156.7
1982	79.1	112.8	130.5	124.9	103.0
1983	86.0	103.1	116.5	121.1	95.2
1984	95.2	110.2	117.1	116.4	105.8
1985	91.7	104.8	106.9	111.9	102.6
1986	87.8	98.6	97.9	108.3	97.7
1987	100.0	100.0	100.0	100.0	100.0
1988	118.2	108.7	104.2	95.8	114.9
1989	112.2	110.5	103.4	93.2	119.5
1990	113.0	109.7	102.3	91.1	119.3
1991	103.7	105.9	95.9	89.5	116.3
1992	109.6	100.0	92.6	87.4	108.0
1993	120.7	104.2	90.1	84.1	118.2
1994	131.5	110.6	90.9	81.8	131.3
Average annual percent change:					
1958-94	1.4	.4	-2.1	-1.0	1.0
1990-94	3.9	.2	-2.9	-2.7	2.4

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the American Iron and Steel Institute; the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Hours based on data from the American Iron and Steel Institute and the Bureau of Labor

Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 193. Metal stampings (SIC 3465, 3466, 3469): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	96.1	84.4	118.0	102.9
1973	98.8	83.8	124.7	103.2
1974	97.3	82.5	107.4	105.5
1975	90.1	80.6	88.5	97.4
1976	94.8	84.2	107.7	99.4
1977	98.2	86.6	118.2	101.8
1978	98.6	88.0	117.5	102.1
1979	98.1	87.7	110.5	102.7
1980	95.8	84.2	92.1	104.6
1981	97.0	85.4	89.9	106.4
1982	93.7	83.4	79.6	103.8
1983	100.2	91.0	96.4	107.3
1984	102.8	95.3	113.5	105.4
1985	98.2	91.9	108.5	100.7
1986	97.2	95.8	101.9	97.3
1987	100.0	100.0	100.0	100.0
1988	102.2	100.5	97.2	103.9
1989	100.6	98.5	94.0	102.8
1990	95.7	93.0	84.6	100.6
1991	95.8	92.6	79.8	100.2
1992	104.4	106.6	94.8	104.4
1993	108.0	113.1	105.6	105.0
1994	112.0	117.6	113.0	108.2
Average annual percent change:				
1983-94	.5	1.4	-1	.0
1990-94	3.7	6.0	7.5	1.8

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of the

Census. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 194. Metal Stampings (SIC 3465, 3466, 3469): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	84.1	85.7	99.7	71.3	81.7
1973	92.5	93.6	110.4	74.2	89.6
1974	82.8	85.1	100.4	77.1	78.5
1975	68.0	75.5	84.3	76.8	69.8
1976	82.5	87.3	98.3	76.9	83.3
1977	94.1	95.8	103.6	79.6	92.4
1978	96.7	97.9	109.9	82.3	94.7
1979	92.7	94.5	105.8	83.9	90.3
1980	78.1	81.5	92.6	84.8	74.7
1981	78.3	80.7	91.6	87.1	73.6
1982	70.4	75.1	84.4	88.4	67.8
1983	83.9	83.7	92.2	87.0	78.2
1984	98.9	96.2	102.7	87.1	93.8
1985	96.8	95.8	105.4	89.2	96.1
1986	95.5	96.3	99.7	93.7	98.1
1987	100.0	100.0	100.0	100.0	100.0
1988	101.5	99.4	101.1	104.5	97.8
1989	99.5	98.9	101.1	105.8	96.8
1990	88.9	93.0	96.7	106.3	89.4
1991	84.3	88.0	91.0	105.6	84.1
1992	98.1	94.0	92.1	103.5	94.0
1993	108.5	100.5	96.0	102.7	103.3
1994	118.7	106.0	101.0	105.0	109.7
Average annual percent change:					
1983-94	2.1	1.6	.6	2.2	2.0
1990-94	7.2	3.3	1.1	-3	5.2

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of the Census. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's

Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 195. Farm and garden machinery (SIC 352): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	105.7	89.4	139.6	103.9
1973	106.2	92.7	149.0	104.5
1974	113.5	94.6	151.0	112.1
1975	107.5	94.2	135.3	105.8
1976	107.7	96.7	129.4	106.7
1977	109.0	97.8	132.6	107.5
1978	107.2	96.4	123.9	107.5
1979	106.5	98.2	144.3	103.5
1980	104.4	91.3	121.8	105.3
1981	101.3	93.4	118.4	100.1
1982	100.4	90.6	95.2	106.6
1983	97.1	88.6	88.4	104.1
1984	101.7	98.5	101.3	103.1
1985	97.4	92.7	90.7	101.7
1986	94.1	93.3	86.5	97.2
1987	100.0	100.0	100.0	100.0
1988	104.7	106.3	117.2	99.9
1989	105.5	110.7	123.4	98.0
1990	110.5	116.6	137.3	100.2
1991	106.6	113.0	126.6	98.2
1992	106.1	114.1	125.8	100.4
1993	106.9	118.8	143.6	95.5
1994	111.2	125.2	159.0	93.6
Average annual percent change:				
1988-94	3	1.9	4	-5
1990-94	2	1.8	3.7	-1.7

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury, Moody's Investor's Service, the Bureau of Economic Analysis, U.S. Department of Commerce, the Bureau of the Census, and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census, and the Bureau of Labor Statistics.

**Table 196. Farm and garden machinery (SIC 352): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	140.7	133.1	157.4	100.8	135.4
1973	166.1	155.3	181.3	112.8	160.8
1974	189.4	166.8	200.3	125.4	168.9
1975	177.4	165.0	188.3	131.1	167.6
1976	173.8	161.3	179.8	134.3	162.9
1977	179.9	165.0	183.9	135.7	167.3
1978	168.2	156.9	174.4	135.8	156.4
1979	200.6	184.8	204.2	139.0	193.9
1980	169.7	162.6	185.9	139.3	161.2
1981	159.6	157.5	171.0	134.8	159.4
1982	123.0	122.5	135.7	129.2	115.4
1983	107.0	110.2	120.8	121.1	102.8
1984	118.1	116.1	119.9	116.6	114.6
1985	101.2	103.9	109.1	111.6	99.5
1986	90.1	95.8	96.6	104.2	92.7
1987	100.0	100.0	100.0	100.0	100.0
1988	117.2	111.9	110.2	100.0	117.3
1989	121.2	114.9	109.5	98.2	123.7
1990	130.7	118.3	112.2	95.2	130.5
1991	13.7	108.5	102.4	91.4	117.8
1992	110.8	102.5	87.1	88.1	110.4
1993	125.9	115.6	106.0	87.7	131.8
1994	142.5	128.1	113.9	89.6	152.2
Average annual percent change:					
1988-94	1.3	1.0	-6	.9	1.8
1990-94	2.2	2.0	-4	-1.5	3.9

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S.

Department of the Treasury, Moody's Investor's Service, the Bureau of Economic Analysis, U.S. Department of Commerce, the Bureau of the Census, and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census, and the Bureau of Labor Statistics.

**Table 197. Refrigeration and heating equipment (SIC 3585): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	99.5	101.0	100.6	81.6
1973	98.8	100.3	100.9	84.0
1974	95.9	103.4	90.0	95.2
1975	80.3	85.3	63.0	85.1
1976	98.2	85.4	84.0	89.1
1977	98.8	95.3	97.1	99.3
1978	100.8	98.3	102.3	101.1
1979	101.4	98.8	99.2	103.3
1980	95.9	90.7	83.9	103.2
1981	98.2	96.0	91.1	102.1
1982	97.0	95.3	80.7	104.8
1983	98.8	96.0	87.2	100.9
1984	99.6	100.1	100.3	99.1
1985	97.0	98.1	95.0	97.2
1986	95.6	95.8	93.1	96.4
1987	100.0	100.0	100.0	100.0
1988	103.5	104.0	106.2	102.4
1989	105.2	109.0	108.9	102.4
1990	100.0	106.3	95.2	98.8
1991	100.1	104.8	94.0	100.0
1992	105.9	107.6	102.2	106.3
1993	107.8	111.8	109.5	105.0
1994	110.1	115.1	120.6	103.8
Average annual percent change:				
1987-94	1.5	1.6	1.4	1.4
1990-94	2.4	2.0	6.1	1.2

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor

Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service, the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census, and the Bureau of Labor Statistics.

**Table 198. Refrigeration and heating equipment (SIC 3585): Output and input indexes, 1972-94
(1987=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	90.1	100.7	89.2	89.6	110.4
1973	101.7	112.0	101.4	100.8	121.0
1974	95.0	99.1	91.9	105.6	99.8
1975	61.3	76.3	71.9	97.3	72.0
1976	77.2	87.5	86.3	91.9	86.6
1977	91.2	92.3	82.7	93.9	91.8
1978	100.4	99.6	102.1	98.1	99.3
1979	100.9	99.5	102.1	101.7	97.7
1980	83.2	86.8	91.7	99.2	80.6
1981	69.5	91.1	93.3	98.2	87.7
1982	78.7	81.1	82.6	97.5	75.1
1983	82.5	85.2	86.0	94.6	81.8
1984	97.1	97.5	97.0	98.8	98.0
1985	94.4	97.3	96.3	99.4	97.1
1986	92.2	96.4	96.3	99.0	95.6
1987	100.0	100.0	100.0	100.0	100.0
1988	108.5	104.8	104.3	102.2	106.0
1989	114.3	108.6	104.9	105.0	111.6
1990	99.5	99.5	93.7	104.5	100.7
1991	94.8	94.7	90.5	100.9	94.8
1992	101.9	96.2	94.7	99.7	95.9
1993	109.8	101.9	98.2	100.3	104.6
1994	125.1	113.7	108.7	103.7	120.6
Average annual percent change:					
1987-94	3.6	2.1	2.0	2.2	2.2
1990-94	5.9	3.4	3.8	-2	4.6

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor Statistics. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's

Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census, and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis; the Bureau of the Census, and the Bureau of Labor Statistics.

**Table 199. Motor vehicles and equipment (SIC 371): Multifactor and related productivity indexes,¹ 1972-94
(1987=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	91.7	67.5	79.2	106.4
1973	95.4	68.7	87.1	110.0
1974	94.6	65.7	71.5	116.1
1975	96.3	70.2	68.2	117.2
1976	101.8	75.1	68.8	117.7
1977	104.2	79.8	98.9	116.5
1978	104.1	79.4	97.1	116.7
1979	102.2	77.7	86.0	117.4
1980	92.2	71.6	61.3	108.8
1981	92.6	73.4	62.4	108.3
1982	92.9	76.7	56.5	108.1
1983	98.2	86.8	78.9	106.2
1984	101.8	91.1	101.4	105.5
1985	105.4	95.3	107.2	108.3
1986	99.7	95.1	100.1	101.0
1987	100.0	100.0	100.0	100.0
1988	102.2	103.2	105.5	101.3
1989	104.6	103.3	109.1	103.8
1990	99.5	102.4	98.6	99.0
1991	98.5	96.7	87.8	102.0
1992	97.8	104.3	96.9	95.9
1993	96.1	105.4	102.9	91.7
1994	96.4	107.3	113.8	89.5
Average annual percent change:				
1958-94	1.0	2.9	3.2	-3
1990-94	-8	1.2	3.6	-2.5

1. The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from company records; the Motor Vehicle Manufacturers Association of the U.S., Inc.; the Goutha/Times Mirror Company (Automobile Invoice Service); Ward's Communications, Inc. (Ward's Automotive Yearbooks); the Bureau of the Census; and the Bureau of Labor Statistics.

Inc. (Ward's Automotive Yearbooks); the Bureau of the Census, and the Bureau of Labor Statistics. Hours based on data from the Bureau of Labor Statistics and company records. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census, and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census, and the Bureau of Labor Statistics.

Table 200. Motor vehicles and equipment (SIC 371): Output and input indexes, 1972-94

(1987=100)

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	69.9	76.2	103.5	88.3	65.7
1973	80.4	84.3	117.0	92.3	73.1
1974	67.2	71.0	102.3	94.0	57.9
1975	62.1	64.5	88.4	91.0	53.0
1976	78.3	76.9	104.3	88.2	66.5
1977	91.1	87.4	114.2	92.1	78.2
1978	94.9	91.2	119.5	97.7	81.3
1979	87.6	85.7	112.7	101.9	74.6
1980	62.8	68.1	87.7	102.4	57.7
1981	65.5	70.7	89.2	105.0	60.5
1982	60.0	64.6	78.2	106.2	55.5
1983	77.1	78.5	88.8	97.7	72.6
1984	93.9	92.2	103.1	92.6	89.0
1985	100.4	95.3	105.3	93.7	92.7
1986	96.9	97.2	121.9	96.8	95.9
1987	100.0	100.0	100.0	100.0	100.0
1988	104.8	102.5	101.5	99.3	103.5
1989	105.2	100.6	101.8	98.4	101.3
1990	96.5	97.0	94.3	97.9	97.5
1991	88.0	89.3	91.0	100.2	86.3
1992	97.9	100.1	93.9	101.0	102.1
1993	105.7	110.0	100.3	102.7	115.3
1994	120.9	125.4	112.7	106.3	135.0
Average annual percent change:					
1958-94	4.4	3.4	1.5	1.2	4.7
1990-94	5.8	6.6	4.6	2.1	8.5

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from company records; the Motor Vehicle Manufacturers Association of the U.S., Inc.; the Goutha/Times Mirror Company (Automobile Invoice Service); Ward's Communications, Inc. (Ward's Automotive Yearbooks); the Bureau of the Census; and the Bureau of Labor Statistics. Hours based on data from the Bureau of

Labor Statistics and company records. Capital based on data from the Internal Revenue Service, U.S. Department of the Treasury; Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of the Census; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Bureau of Economic Analysis, the Bureau of the Census; and the Bureau of Labor Statistics.

**Table 201. Railroad transportation (SIC 4011): Multifactor and related productivity indexes,¹ 1972-93
(1967=100)**

Year	Multifactor productivity	Output per hour	Output per unit of capital	Output per unit of intermediate purchases
Index:				
1972	58.5	42.1	72.0	85.6
1973	64.1	45.5	80.3	91.0
1974	63.2	45.5	80.2	90.1
1975	59.0	43.3	70.8	84.1
1976	62.6	46.9	77.3	84.9
1977	65.3	49.1	82.5	86.8
1978	67.3	51.6	85.2	86.9
1979	68.9	54.3	88.1	84.7
1980	67.9	54.6	85.1	82.0
1981	67.7	55.1	83.7	81.1
1982	68.6	58.3	75.0	82.0
1983	80.3	72.0	81.9	92.3
1984	86.3	78.0	91.6	96.1
1985	87.5	81.5	89.8	95.1
1986	91.2	89.2	90.5	94.3
1987	100.0	100.0	100.0	100.0
1988	105.7	108.4	107.4	101.4
1989	109.7	114.6	111.3	102.5
1990	113.6	118.5	114.8	106.6
1991	117.5	127.8	118.3	105.8
1992	124.9	139.6	123.5	109.3
1993	129.0	145.6	129.0	110.6
Average annual percent change:				
1958-93	3.9	5.9	3.2	1.2
1990-93	4.3	7.1	4.0	1.2

¹ The output measures underlying the productivity indexes relate to the total net production of the industry. They do not relate to the specific output of any single factor of production.

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission, the Association of American Railroads, and the National Railroad Passenger Corporation. Hours based on data from the Interstate Commerce Commission. Capital based on data from the Interstate

Commerce Commission; the National Railroad Passenger Corporation, the Internal Revenue Service, U.S. Department of the Treasury, Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Interstate Commerce Commission, the Association of American Railroads, the National Railroad Passenger Corporation, the Edison Electric Institute, and the Bureau of Labor Statistics.

**Table 202. Railroad transportation (SIC 4011): Output and input indexes, 1972-93
(1967=100)**

Year	Output	Combined inputs	Hours	Capital	Intermediate purchases
Index:					
1972	91.0	155.6	216.1	126.4	106.3
1973	99.8	155.3	214.0	124.0	109.4
1974	97.8	154.7	214.8	121.9	108.6
1975	84.9	143.9	195.9	120.0	100.9
1976	91.4	146.0	194.9	118.2	107.7
1977	96.4	147.6	196.2	116.8	111.0
1978	98.6	146.4	191.2	115.7	113.5
1979	101.1	146.7	186.3	114.8	119.3
1980	97.3	143.3	178.3	114.4	118.7
1981	95.1	140.4	172.5	113.6	117.2
1982	83.8	122.1	143.8	111.8	102.2
1983	89.2	111.1	123.8	106.9	96.6
1984	97.3	112.7	124.7	106.2	101.3
1985	93.7	107.1	115.0	104.4	98.5
1986	92.9	101.9	104.1	102.6	98.5
1987	100.0	100.0	100.0	100.0	100.0
1988	105.0	98.3	98.9	97.8	103.6
1989	106.6	97.2	93.0	95.8	104.0
1990	107.8	94.9	91.0	93.9	101.1
1991	107.0	91.1	83.7	92.0	101.1
1992	111.4	89.2	79.8	90.2	101.9
1993	114.3	88.6	78.5	88.6	103.3
Average annual percent change:					
195	1.4	-2.5	-4.2	-1.8	2
1990	2.0	-2.3	-4.8	-1.9	.7

NOTE: Because of periodic revisions in source data, the measures in the table may differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission, the Association of American Railroads, and the National Railroad Passenger Corporation. Hours based on data from the Interstate Commerce Commission. Capital based on data from the Interstate Commerce Commission; the National Railroad Passenger Corporation;

the Internal Revenue Service, U.S. Department of the Treasury, Moody's Investor's Service; the Bureau of Economic Analysis, U.S. Department of Commerce; and the Bureau of Labor Statistics. Intermediate purchases based on data from the Interstate Commerce Commission, the Association of American Railroads, the National Railroad Passenger Corporation, the Edison Electric Institute, and the Bureau of Labor Statistics.

Appendix A. Methods and Data Sources

Industry Labor Productivity Measures

The output indexes and employee hour components of the industry productivity indexes are based on data from a number of different sources, which are identified in the tables. All output per employee hour measures for 1995 are considered preliminary and are subject to revision. The indexes refer to a standard reference base 1987=100, and they conform to the 1987 Standard Industrial Classification (SIC) definitions.

Output

Data from the Bureau of the Census, U.S. Department of Commerce, are used extensively in developing output statistics for manufacturing, trade, and services industries. The U.S. Geological Survey compiles most of the information for the mining and cement industries. Other important Government sources include the U.S. Departments of Energy, Agriculture, Transportation, and Housing and Urban Development; the Federal Railroad Administration; the Federal Reserve Board; and the Federal Deposit Insurance Corporation. Important sources of trade association data include the Textile Economics Bureau, Inc., National Association of Hosiery Manufacturers, Inc., National Canners Association, Rubber Manufacturers Association, the American Iron and Steel Institute, Association of American Railroads, Ward's Communications, Rice Miller's Association, National Automobile Dealers Association, Pharmaceutical Manufacturers Association, American Bus Association, International Sleep Products Association, American Truck Association, American Paper Institute, Anti Friction Bearing Manufacturers' Association, Fiber Box Association, Institutional Furniture Manufacturers' Association, VISA-CARD Network and Interbank Card Network Association, National Automated Clearing House Association, Agricultural Chemicals Association, Association of Oil Pipelines, and the American Gas Association.

The indexes of output per employee hour are computed by dividing an index of output by an index of aggregate employee hours. Corresponding measures also are computed relating output to the number of employees. For industries in trade and services, measures are prepared relating output to the hours of all persons, including self-employed and unpaid family workers, involved in producing that output.

Output is calculated with a formula that aggregates the growth rates of the various industry products between two periods with weights based on the products' shares in industry value of production—the weight for each product equals its average value share in the two periods.

Specifically, output is calculated with the Tornqvist formula

$$\frac{Q_t}{Q_{t-1}} = \exp \left[\sum_{i=1}^n w_{i,t} \left(\ln \frac{q_{i,t}}{q_{i,t-1}} \right) \right]$$

where: $\frac{Q_t}{Q_{t-1}}$ = the ratio of output in the current year (t) to output in the previous year ($t-1$)
 n = number of products

$\ln \frac{q_{i,t}}{q_{i,t-1}}$ = natural logarithm of the ratio of the quantity of product i in the current year to the previous year
 $w_{i,t}$ = average value share weight for product i

The average value share weight for product j is computed as

where: $w_{j,t} = (s_{j,t} + s_{j,t-1}) / 2$

$$s_{j,t} = p_{j,t} \cdot q_{j,t} + \left(\sum_{i=1}^n p_{i,t} \cdot q_{i,t} \right)$$

$p_{i,t}$ = price of product i at time t

The Tornqvist formula yields the ratio of output in one year to the previous year. These ratios must be chained together to form a series. If $t = 3$ and the base year is denoted by 0, then

$$\frac{Q_t}{Q_0} = \frac{Q_t}{Q_1} = \left(\frac{Q_1}{Q_0} \right) \left(\frac{Q_2}{Q_1} \right) \left(\frac{Q_t}{Q_2} \right)$$

The resulting chained output index, $\frac{Q_t}{Q_0}$, is used in the productivity formula.

The quantities of products used in the output index (the q_i 's) are measured with deflated values of production or with actual physical quantities. More than two-thirds of the indexes measuring industry output are derived from data on the value of industry output, adjusted for price change (i.e., deflated value of production). This deflation takes place at the most disaggregated level for which data are available; for manufacturing industries this is the 5-digit product class level.

The resulting indexes are conceptually equivalent to indexes which are developed using data based on physical quantities of products. An index of these deflated values shows the change in the real value of output between the past and current periods.

Periodically, the output indexes for most of the measures are adjusted to levels based on comprehensive data reported in the economic censuses for mining, manufacturing, trade, and services. The most current adjustments presented in this bulletin reflect data from the 1992 economic censuses.

Employee hours

Employment and employee hour indexes are developed primarily from basic data compiled by the Bureau of Labor Statistics and the Bureau of the Census. BLS data are from the Bureau's monthly establishment survey (the Current Employment Statistics survey) and the Bureau of the Census data are from the Census of Manufactures and the Annual Survey of Manufactures. In concept, employee hours data from the Bureau of the Census relate to plant hours only. Employee hours data from BLS include both hours at work and hours paid for but not worked (such as paid vacation time).

In general, BLS data are the preferred source for measuring industry employment and hours because they are collected monthly and are benchmarked each year to comprehensive data from the State unemployment insurance programs. Although both BLS and the Bureau of the Census provide data on production worker hours, neither source provides annual data by industry on nonproduction worker or all-employee hours.² Therefore, the nonproduction worker hours are estimated.

For the manufacturing industries, estimates of aggregate nonproduction worker hours are derived from published employment data and from estimates of average annual hours paid or worked per nonproduction worker. Estimates of all-employee hours are derived by summing the aggregate hours for production workers and the estimated hours for nonproduction workers.

For the trade and services industries, measures of the hours of partners, proprietors, and supervisory workers are developed. Except for hotels and motels, and beauty and barber shops, estimates are also made for the hours of unpaid family workers. Average weekly hours worked for partners, proprietors, and unpaid family workers are obtained from unpublished data collected in the Current Population Survey. Average weekly hours worked by supervisory employees are obtained from the censuses of population. Estimates for

² The term "production workers" includes working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping, trucking, hauling, maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with the above production operations. The term "nonproduction workers" covers all remaining employees, such as professional, technical, clerical, and supervisory.

intercensal years are derived using extrapolation and linear interpolation techniques. Hours of all persons are derived by summing the aggregate hours for paid employees, partners, proprietors, and unpaid family workers.

The employee hour index is computed by dividing the aggregate employee hours for each year by the base-period. Employee hours are treated as homogeneous and additive with no distinction made between hours of different groups of employees. The employment index is computed by dividing the aggregate employee hours for each year by the base-period. Employee hours are treated as homogeneous and additive with no distinction made between hours of different groups of employees. The employment index is computed by dividing the aggregate number of production and nonproduction workers for each year by the base-period.

Commercial Banks

The labor productivity series for commercial banks (SIC 602) was revised from 1987 forward to reflect improved data sources and changes in the composition of services provided by banks. Data from the American Bankers Association, the Federal Deposit Insurance Corporation, and the Federal Reserve Board were used to revise the output measurements of demand and time deposit account activities. In addition, the output index now includes data on ATM transactions, home equity loans, and money market accounts.

Industry Multifactor Productivity Measures

Output

Output measures used in the industry labor productivity series are also used in the multifactor productivity measures.

Employee hours

Employee hours indexes used in the industry labor productivity measures are also used in the multifactor productivity measures.

Capital

The measure of capital input is based on the flow of services derived from the stock of physical assets. Physical capital consists of equipment, structures, land, and inventories. Financial capital is excluded. Capital services are estimated by calculating capital stocks; changes in the stocks are assumed to be proportional to changes in capital services for each asset. Stocks of different asset types are Tornqvist-aggregated, using cost shares based on estimated rental prices to construct the weights for assets of different types.

Capital stocks are calculated using the perpetual inventory method, which takes into account the continual additions to and subtractions from the stock of capital as new investment and retirement of old capital occurs. The perpetual inventory

method measures stocks at the end of a year equal to a weighted sum of all past investments, where the weights are the asset's efficiency relative to a new asset. A hyperbolic age-efficiency function is used to calculate the relative efficiency of an asset at different ages. The hyperbolic age-efficiency function can be expressed as:

$$S_t = (L-t)/(L-(B)t)$$

where:

- S_t = the relative efficiency of a t -year-old asset
- L = the service life
- t = the age of the asset
- B = the parameter of efficiency decline

The parameter of efficiency decline is assumed to be 0.5 for equipment and 0.75 for structures. These parameters yield a function in which assets lose efficiency more slowly at first, then rapidly later in life.

Stocks of equipment, structures, inventories, and land are estimated separately. Individual price deflators for each asset category are constructed and used to convert the current-dollar investment to constant dollars. Industry-specific service lives are computed for each type of equipment asset for use in the perpetual inventory method.

Current-dollar values of inventory stocks are calculated for three separate categories of manufacturers' inventories: Finished goods, work in process, and materials and supplies. Inventory stocks for each year are calculated as the average of the end-of-year stocks in years t and $t-1$ to represent the average used during the year as a whole. This is also done with equipment, structures, and land. Current-dollar inventory values for the three categories of inventories are deflated with appropriate price indexes.

Land stocks are estimated as a function of the movement in constant-dollar gross structures stocks for the given industry.

The various equipment, structure, inventory, and land stock series in constant dollars are aggregated into one capital input measure using estimated rental prices as weights. Rental prices are calculated in a manner similar to that used to calculate multifactor productivity for major sectors of the economy except that no attempt is made to incorporate the effects of indirect business taxes, for which data are lacking at the industry level.

Rental prices are expressed in rates per constant dollar of productive capital stocks. Each rental price is multiplied by its constant-dollar capital stock to obtain current-dollar capital costs which are then converted to value shares for Tornqvist aggregation.

Industry capital indexes are developed from basic data published and maintained by the Bureau of the Census and the Bureau of Economic Analysis, U.S. Department of Commerce; the Office of Employment Projections, Bureau of Labor Statistics; and the Surface Transportation Board.

Price indexes are derived from producer price indexes developed by the Bureau of Labor Statistics.

Intermediate purchases

The index of intermediate purchases input is an aggregate of separate indexes of change in real materials, services, fuels, and electricity consumed by an industry. With the exception of electricity, for which both price and quantity data are available, the above indexes are calculated by dividing annual current-dollar values by appropriate price indexes to obtain constant-dollar annual estimates. Separate price deflators for materials and fuels for each industry are constructed using detailed price and value data for individual subcomponents of each group. The aggregate deflators are divided into the current-dollar values to derive constant-dollar estimates. The constant-dollar series for each component are indexed by dividing each year's estimate by the base-period aggregate.

The indexes of change in real materials, services, fuels, and electricity are weighted together in a Tornqvist aggregation with value share weights to derive an aggregate intermediate purchases index. These weights are derived by dividing the current-dollar values of each by the total combined value of intermediate purchases, and averaging these weights at times t and $t-1$.

Industry intermediate purchases indexes are developed from basic data published by the Bureau of the Census, the Bureau of Economic Analysis, the Surface Transportation Board, and the Association of American Railroads.

Weights for major input components

The indexes representing quantity change for each of the three major inputs are Tornqvist-aggregated to compute the index of combined inputs. The relative weights for each year are derived from total costs for each input. All-employee labor costs, including benefits, are used for the labor weight. The sum of current-dollar values for materials, services, fuels, and electricity constitute the weight for intermediate purchases. The weight for capital is derived by subtracting labor costs and the value of intermediate purchases from total revenue. These compensation shares are averaged at time t and $t-1$.

Rates of Change

The rates of change published in this bulletin are average annual percent changes calculated using the compound rate formula: $((X_T/X_I)^{1/n} - 1) * 100$, where X_n is the value of an index number in year n , I is the initial year of the period, T is the terminal year of the period, and n equals T minus I . The rates of change shown in each table indicate the first year of available data, in some cases beginning in 1947. However, due to space limitations, the industry productivity tables in this bulletin do not provide indexes prior to 1972. Indexes and average annual rates of change for time periods not shown are available on request from the Bureau of Labor Statistics.

Appendix B. BLS Publications on Productivity and Technology

How to order

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Papers and information regarding reports and articles published prior to 1977 are available from the Bureau's Office of Productivity and Technology.

Productivity trends in individual industries

"Multifactor Productivity in Refrigeration and Heating Equipment," by Paul V. Kern and Patricia S. Wilder, *Monthly Labor Review*, May 1997, pp. 6-13.

"Productivity in the Fabricated Plate Work Industry: 1982-94," by Jim York, *Monthly Labor Review*, May 1997, pp. 3-5.

"Productivity Trends in the Mobile Homes Industry," by John G. Olsen, *Monthly Labor Review*, May 1997 pp. 14-18.

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"Productivity in Industry and Government, 1973-94," by Alexander Kronemer, *Monthly Labor Review*, November 1996, pp. 43-49.

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